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ASSISTANT EDITORS,

J. T. HODGE, *For Mining and Metallurgy.*

GEN. CHAS. T. JAMES, *For Manufactures and the Mechanic Arts.*

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American Railroad Journal.

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Saturday, February 15, 1851.

Accidents on Railroads.

We can hardly look into an exchange paper of late, without meeting an account of some dreadful accident on railroads. These have become so alarmingly frequent, as to create great uneasiness on the part of travellers for their own safety, and is a source of great expense to companies, not only in *repairs*, but in the still greater one, of paying for mangled limbs, and for life destroyed. Certainly something should be done to prevent this crying evil.

A few days since a train of cars tumbled down a high bank on the Erie railroad into the Delaware river. Within a day or two, a most serious accident occurred on the Housatonic railroad. The cars were precipitated down a high bank of some 30 or 40 feet, and a large number of passengers very seriously injured.

It generally turns out that "no one is to blame" in these accidents. They are attributable to some cause that no person could have foreseen, or to some latent defect, which only shows itself after the disaster occurs. As far as immediate responsility on the part of persons employed is concerned, this may be true. Take the case of the late accident on the Erie railroad. This was caused by the breaking of a rail, owing to the poor quality of its iron, for no good rail will break short off, without showing indications of this before hand. The accident probably occurred at a curve of the road, and the fitting the rail to this, very likely was the primary cause of the fracture. At any rate a bad rail was used. The whole lot, of which this was a part, might have been bad, or this might have been an exception. If so, the exception may again happen at some other dangerous points, and the unlucky traveller may again be pitched down a precipice, at the imminent risk of life and limb.

The great question is, how shall these accidents be prevented? Is there any difficuity in this? for if so, our railroads will begin to be looked upon as very dangerous modes of travelling. There can be no question but these accidents may be placed almost beyond the bound of possibility, by proper care, and by the use of suitable material, both in the rail and the rolling stock.

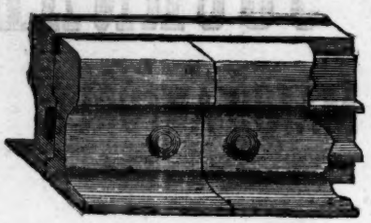
It is notorious that at the present low price of rails, a great many of our roads are laid with a very poor iron, entirely unsuitable for its purpose, both as regards true economy and safety. Where roads are built upon *contract*, the contractor puts down the cheapest article he can get. His connection with the road is over as soon as he can get the work accepted. Roads are thus very often put in operation, when the lives of the passengers are jeopardised every time that a train passes over them. Where the company purchase their own iron, the result is often the same. Most of them, for the want of sufficient means, or a proper idea of the importance of a liberal expenditure in the outset, or from mistaken ambition of having the reputation of building the cheapest road going, act upon the false principle of economy, of using what *cost* the least, without any regard to *quality*. Such are facts too notorious to require proofs. In the end, a succession of accidents, the legitimate result ef this *kind of economy*, will force a company into the proper steps to remedy them, to relay the track, or buy new furniture, and throw away the old. The cost of a road in this way is about double, nearly one half ot which might have been saved, by using the proper materials in the first instance.

How shall this evil be remedied? Shall it be left to work its own cure by a process which shall half destroy the life ot the patient, or shall it become the subject of legal interposition? We think it should, though we are generally opposed to legislative interference with the operations of companies. As things are now, directors cannot be brought to a proper sense of their duties. They have not the courage frequently to act according to their convictions, to withstand the desire of having the reputation of buying *low*, to gain an eclat in the community, or some supposed advantage over other roads. Nothing is more common than the remark, "I should like to purchase a good article; I think it would be economy in the long run; but we must husband our means, and buy where we can buy cheapest. If we give a high price, we cannot build our road." This is the argument used. The cheapest article is often bought for no other reason but its cheapness. The consequence is, that it comes to repair as soon as it is used, and the company soon finds itself compelled by the constant annoyance of accidents, and the cost of repairs, to throw away the *cheap* for the *economical*.

While as a general rule, companies should be left, in the management of their affairs, to the guidance of their own ideas of economy, or prudence, the community should, in its collective capacity, see that certain conditions, essential to personal safety, are followed in all cases. One of these conditions should be, that, on all dangerous curves, either upon an embankment, or of a short radius, an iron should be used of known and tested quality, about which there can be no mistake. If such an article had been used, the accident on the Erie railroad would have been prevented. So with iron bridges. What does the travelling public know about the safety of these structures? What do companies know about the quality of iron used? Nothing. All this is left to the contractor. His chief motive is to make all the money he can. The only inducement to the use of proper materials, is his own reputation. The same is to a certain extent true of every article in use, both upon railroads and their equipment.

There has been recently invented a new rail, which, it strikes us, is exactly adapted for safety

on curves, and should be used in all cases. We refer to the "compound rail," of which we gave some account in our paper of the 18th ult., and of which the following cut will give a good idea.—



With a rail of this form, accidents from a misplacement or break of the rail, which are now so common, would be almost impossible. This may be made a continuous rail for miles. If it is composed of good iron and properly put together, it is exactly adapted to resist the enormous centrifugal force produced by high speeds on short curves. With this, the curves can be made perfectly true. No immediate evil can happen from the loosening of a spike, the breaking of a chair, or the settling of a cross tie. In the crossing of bridges, such a rail would of itself sustain a train, even if the structure should give way. In many respects its use would be a vast saving. In principle, nothing can be more faulty than the form in common use, by which the line is made up of distinct *pieces*, and which require to be held in their places by chairs of great strength, and between which and the rails the concussion produced, not only destroys the rail, but for a similar reason, is the great cause of the wear and tear of machinery. The new rail is perfect in principle. It has proved to be equally so in practice, as far as it has been used. Is it not then the bounden duty of companies to turn their attention to this subject, and to adopt it, should further experience confirm the present evidence in its favor. If it is what it is believed to be, should not companies be required to use it in all places where accidents are likely to be attended with serious consequences?

Railroad Improvement.

The Richmond Enquirer contains the following detailed notice of the experiment, made on Saturday last, at Richmond, of the invention to overcome high grades on railroads. It seems to have proved completely successful, and if it can be brought into ordinary use will be of immense value:

James S. French's Experimental Railway.—Last winter the legislature appropriated $10,000, to test the invention of Mr. French for ascending high grades on railroads. Mr. French has expended a large sum in arranging a locomotive and car for the purpose, and for laying down a railway on the opposite side of the river, a mile above Richmond. It starts from the Danville railroad, near the Spring Hill Factory, in a valley just above the "Haunted House," and runs up hills and over streams in a direction perpendicular to the river. The experiments with the railway were very interesting; tho' on account of some accident to the steam boxes of the locomotive, they were not as full as desirable.

For the ascending and descending of undulating surfaces, it seems clear to us that no better method can possibly be found, combining as it does many requisite qualifications, viz: despatch in the construction of roads, greater cheapness and certainty of travelling; as, by this method, the road is neither affected by frost, ice, or even grease itself, [for the latter has been tried.] On this railway the road as constructed by Mr. French is more than a third of a mile in length, on a grade of 200 feet to the mile. The ends of the sills are cut off square with the string pieces; the rail, six inches wide, and three fourths of an inch thick, is placed upon the string pieces, and extends outwards two and a half inches, thus affording an under surface against which a pair of rollers [the simple principle of the whole invention] are pressed. These rollers or wheels are suspended from the engine, a little in advance of the driving wheels, and are pressed against the extended rail by a lever, by the regulation of which any amount of adhesion may be obtained. This mechanical adhesion has the advantage of being graduated to circumstances, for on running on a level but little adhesion is required, and on reaching any inclined surface it is put on in a quantity requisite for ascending, and no more.—Thus are avoided the effects of weight in a great measure; whereas, on the ordinary principle, much dead weight is put on, only to be made use of at certain points, and destroying the road on every passage over it. The engine used for the experiment is only 3½ tons, and was built by Messrs. Hogg & Delamater of New York, under the superintendence of Capt. John Errickson, a gentleman well known for his great mechanical talents. Up this grade of 200 feet, this little engine drew a passenger car filled with about 100 passengers, at a velocity of perhaps ten miles an hour. On descending, both engine and car were perfectly under control, capable of being stopped at any moment in a space of ten feet, and this while descending by steam power and the force of gravity combined.—The experiments have clearly indicated the practical use to which this invention can be applied.

Among the two hundred persons present on Saturday, there seemed to be a general gratification with the experiment. One of the great objects to be gained by this invention is that the same power may be obtained by a lighter engine and cars, and consequently less wearing out and injury to the rails. We hear that the highest grade ever surmounted by locomotives is one hundred and eighty feet in a mile, in Pennsylvania. But there, it required a locomotive of 20 tons—while, with Mr. French's invention, a locomotive of only 3½ tons [the "Climber"] overcame a grade of two hundred feet in a mile. When the experiment shall have been fully tested, and a heavy weight shall have been drawn up and down, and great power shall have been obtained by lighter engines, it will be for the State to order the adaptation of the invention to some portions of the various roads now being built, to which it is applicable. We know not what may be the effect, in time, of the heavy friction of the two small rollers, revolving 1700 times, while the driving wheels revolve only 32 times.

We are not engineers enough to venture a prediction as to the permanent usefulness of the invention. As far as it went, it succeeded perfectly on Saturday, and we heard several mountaineers declare that if the invention could succeed in overcoming the grade of the present experiment, it would be sufficient for railroads through their mountain passes. In this age of invention, we should not be surprised to see this application so improved, that, in less than a year, it will be made use of in surmounting the Blue Ridge, superseding the very expensive and snail-like tunnels through the mountains.

From the Merchant's Magazine.

Internal Improvements of the State of New York.

A SKETCH OF THE RISE, PROGRESS, AND PRESENT CONDITION OF INTERNAL IMPROVEMENTS IN THE STATE OF NEW YORK.

RATES OF TOLL ON THE NEW YORK STATE CANALS.

Continued from page 83.

The canal board, in a report written by Colonel Young, answered this resolution in Febuary, 1830, (Leg. Doc. No. 291,) in which it was asserted that the canals, separate from auction and salt duties, "have yet done nothing towards the extinguishment of their debt." "In every point of view, therefore," says the report, "it becomes a matter of sound policy, and a dictate of justice, in reference to 'the interests of State,' to fix the tolls at such rates as will give the greatest amount of revenue. But this object cannot be accomplished by raising the tolls beyond a certain amount, and this amount it is difficult, in many cases, to ascertain with precision before the experiment is made. The cheapness of an article increases its use; and where there are competitors in various places, in the production of any exchangeable commodity, a small impediment placed in the road to market which some of them are compelled to travel, would in some instances entirely destroy their business. The city of New York is supplied with lumber, in part, from the State of Maine, from the country bordering Lake Champlain, and from the western part of this State. The Lake Champlain lumber passes upon the Champlain canal about sixty miles, whilst the western lumber is compelled to traverse the Erie canal from 100 to 250 miles.* It is apparent, then, that if tolls should be raised much on lumber, this article from the west would be entirely excluded from competition in the New York market; and the canal fund would *lose* all that it now gains from this source. An increased toll on pot and pearl ashes, on beef and pork, wheat, flour, &c., might drive these articles to the Canada market, in whole or in part, and thereby diminish instead of augmenting the avails of the canal fund. It is not believed that the rates of toll on the descending articles can be advantageously increased. The articles of merchandise which now pay three cents a ton a mile, may, it is believed, be increased to three cents and five mills." And it was estimated that this would add from thirty to thirty-five thousand dollars to the amount of revenue.

The report adds:—"The canal board have, at the present session, passed an ordinance directing that the provisions of the Revised Statutes in reference to weights shall be carried into effect upon the canals. This regulation abolishes gross weights and will thereby add 12 per cent to the tolls on all articles which are estimated by weight. An addition to the revenue of seventy-five or eighty thousand dollars may be expected from this regulation."

On the 20th of March, Mr. Maynard introduced a resolution which was adopted by the Senate, calling on the Attorney-General for his opinion whether it was constitutional to impose on, and collect from, the canals referred to in the 10th section of the 7th article, any higher rates of tolls; or on salt or goods sold at auction, any greater duties than those fixed by said article of the constitution.

Judge Bronson, who was at that time Attorney General, answered this resolution on the 29th of March, (Leg. Doc. 344, 1830.) After referring to the section which pledges the canal revenues to the payment of the debt, the report says:—"The Attorney General is of opinion that this provision was not designed to limit the power of the Legislature in calling forth the resources of the State to their full extent, either by imposing and collecting increased tolls and duties, or by any other means; but that it was intended as a renewed pledge, in a form beyond the control of the Legislature, that an amount of revenue equal at the least to the sum which the tolls and duties in question would produce, should be levied and collected, and be inviolably appropriated and applied to the redemption of the debt which had been, or should thereafter be, incurred in the construction of the canals. That the framers of the constitution only designed to guard against the reduction, and not against the increase of tolls and duties, is evident from the fact, that the former was expressly provided for, while nothing was said of the latter." "But although the Legislature may increase the rates of toll upon the canals, and the duties on salt and sales at auction, it is believed that this can only be done for the purpose of augmenting the amount of revenue to be derived from those sources; otherwise such tolls and duties might be imposed as would exclude all merchandise from the canals, prevent the manufacture of salt, and put an end to sales at auction." "The boundaries then which the constitution has prescribed to the power of the Legislature are, that the rates of toll upon the canals and the duties on salt and sales at auction, as they were established in 1821, shall not in any event be reduced, while the canal debt remains; nor shall they be increased to such an amount as

* In 1830, the Oswego, which intersects the Erie canal 171 miles from Albany, and the Cayuga and Seneca, at a distance of 205 miles, were the only lateral canals them in operation.

would result in a diminution of the canal revenue." "It is a well established principle concerning trade, that increasing the cost of an article will (all other things being equal) diminish the amount of consumption, and consequently, there can be no means of ascertaining the income of revenue which will be produced by a given rate of increase in the duties imposed." "If then it be conceded that the constitution has not in terms appropriated the increased revenue that may arise from increased duties, how shall it be determined what portion of the whole revenue belongs to the canal fund, and what amount may be directed or applied to other objects? To say that the Legislature, in the absence of any certain guide to a just result, may exercise its best judgment upon the question, involves the power of indirectly directing a portion of the funds which have been pledged by the constitution to a specific object."

On the 13th of April, Mr. Pettibone, of the Assembly, from Oneida, introduced a concurrent resolution directing the canal board to suspend, until the 1st of January next, the collection of any increased tolls on the canals since the 31st of December last. This passed the Assembly by a vote of 86 to 14.

When this resolution came up for consideration in the Senate, N. S. Benton, of Herkimer, moved as an amendment, "that the canal board suspend, until January next, the collection of the five mills per ton, per mile, additional toll added by them upon freight ascending the canals from tide water;" and that on articles charged by weight the rates be so graduated as to conform to those of 1829, but not to raise the tolls on any articles on which they made a reduction at their late session, or to reduce the rates on packet boats. This amendment was concurred in by the Assembly, and the tolls were graduated accordingly.

Previous to 1827, the toll on tobacco prevented its transportation through the Erie canal to tide water. In that year the toll was reduced to the constitutional minimum; and in 1829 there came to tide water 32 tons; in 1830, 62 tons; in 1831, 222 tons; in 1832, 386 tons; in 1833, 535 tons; in 1834, 1,009; and in 1835 1,750 tons.

In 1829, the toll on copperas, which had been charged at ten mills per ton as a non-enumerated article was reduced to five mills coming towards tide water. This was done on a representation that the quantity produced on the west side of the mountains in Vermont, which had previously been carried by land to Boston, would by such reduction be transported to New York through the Champlain canal. During the first season after the reduction, 110 tons of copperas were cleared at Whitehall, and this quantity was increased from year to year, until in 1835, the quantity cleared was 693 tons.

In the same year, on a petition of the millers of Rochester, the toll on bran and ship stuffs was reduced 50 per cent, and the first season after this reduction there came to tide water 590 tons, and the next year, 3,592 tons, valued at $86,348. In 1849, the quantity coming to tide water was 18,400 tons, valued at $242,000.

In 1825, the toll on household furniture was fixed at one cent per ton per mile. Subsequently this rate was limited to "furniture accompanied by, and actually belonging to, families emigrating." And in 1830, or previous, the same rate of toll was extended to carts, wagons, sleighs, plows, and mechanics' tools, of emigrants. In July, 1845, these rates were reduced to six mills per ton per mile.

A majority of the canal board, adhered, perhaps, too rigidly to the original rates of toll, except in a few cases like those which have been enumerated; and there was no general reduction in the rates of toll previous to 1833. In the spring of the latter year, in anticipation of the opening of the Ohio canal from Cleveland to the Ohio river, the canal board made a general reduction in the rates of toll equal on the average to 20 per cent on all articles transported. The rate on merchandise was reduced from 14 to 12 mills per 1,000 pounds per mile, being a small fraction more than 14 per cent leaving the toll at 24 mills per mile on a ton of 2,000 pounds, equal to $8 71 on a ton of merchandise from Albany to Buffalo. The rates on the Ohio canal were fixed in 1830, at four cents per gross ton per mile, for the first 100 miles, and three cents for every additional mile, equal to $10.27 on a gross ton from Cleveland to the Ohio river. It was considered necessary to make a considerable reduction in these rates in order to supply the valleys of the Ohio and Mississippi with merchandise from New York, through the Erie and Ohio canals. The State of Ohio had a direct interest in securing this trade to their canal; and a correspondence took place between the canal commissioners of the two States which resulted in a meeting between a committee of the commissioners of Ohio and the canal board of the State of New York in the summer of 1833. Judge Tappan, late United States Senator, and Alfred Kelly, for many years canal commissioner, attended on the part of the State of Ohio. At their meeting, which took place at the Comptroller's office in Albany, it was mutually agreed to make a reduction of 25 per cent on the rates of toll on merchandise on the Erie and Ohio canals, to take effect on the opening of navigation in 1834.

In September, 1833, the Comptroller, (A. C. Flagg,) addressed a circular to a number of merchants in the Western States and Territories, informing them of the reduction in the rates of toll made, and contemplated to be made, and soliciting information to enable the canal board to judge of the expediency of further reductions. This circular alluded to the joint action of Ohio and New York in regard to the reduction of 25 per cent on merchandise, and stated that the charges on the New York canal would be $6 53 on a ton of 2,000 pounds from Albany to Buffalo, a distance of 363 miles, being less by $3 63 than the sum charged prior to 1833. "By this reduction of more than one-third in the rates of tolls on merchandise, it is supposed that goods may be transported through this channel for a region of country much more extended than that which has heretofore received its supplies of merchandise from New York." The circular also informed them that the toll on wheat, flour, salted beef and pork, and most agricultural productions, had been reduced from $5 08 to $3 63 on a ton from Buffalo to Albany. Inquiries were also made in regard to their place of market, the products sent, mode and price of transportation, and where their merchandise was obtained, and cost of transportation: And "whether any of the products of their region would bear transportation to market through the Erie canal by a reduction of of tolls, which now find a market in another direction, and what must the reduction be to effect the object?" Whether any canals or railroads were in progress which would affect the present channels of transportation—whether any products were sent to Montreal through the Welland canal, and the cost of transportation—and whether those who sent products to Montreal purchased goods there, and what kind?—Whether the Onondaga salt was sent to their region, and its price? The cost of transportation to and from New Orleans; the landing place on the Ohio, or Mississippi, and the number of miles of land carriage, &c.

Answers were received from eight States, and one Territory, which afforded valuable information to the canal board, in graduating the tolls on the canals. A letter from Huntsville, Alabama, says: —"If goods can be delivered in a reasonable time, say 20 or 30 days, at Portsmouth from New York, for $2 per 100 pounds, it will secure the trade of this country when the canal is open. The cost of 100 pounds from Cincinnati to this place averages $2 25; the usual route is first to Louisville, 150 miles, thence down the Ohio to the mouth of the Tennessee, about 400 miles by steamboats, thence up the Tennessee 300 miles to Florence, a town at the foot of the Muscle shoals, from thence by wagons to this place, a distance of 75 miles. The cost from New Orleans to this place is $2 per 100 lbs., making the total cost from the eastern cities coastwise, $3. By Wheeling and Pittsburg, from $5 to $6. It would be about $4 if delivered at Portsmouth for $2.

This correspondence showed that merchandise was sent from the city of New York to Huntsville and Florence, in Alabama; Nashville, Tennessee; St. Louis, Missouri, and Lexington, Kentucky.—The distance from New York to Huntsville is 2,010 miles, of which 672 miles are taxed with tolls on the Erie and Ohio canals. Goods for Nashville, Tennessee, follow the Huntsville route before described, to the mouth of the Cumberland river, (13 miles above the Tennessee,) and then ascend the Cumberland about 200 miles to Nashville. It cost (in 1833) about $1 per 100 pounds more to transport goods to Nashville and Florence by the Erie canal route, than from New York to the same places coastwise and by New Orleans. The Erie route, however, was considered much the safest, and could be performed in 10 or 12 days less time, and this was assigned by an intelligent merchant as the reason for giving this route a preference.

In the report made by the commissioners of the canal fund respecting the tonnage and tolls in 1836, written by A. C. Flagg, and signed by John A. Dix, Wm. Campbell, and A. Keyser, after reviewing the measures adopted in reducing tolls, which it was confidently asserted would enable our merchants to send great quantities of merchandise into the valleys of the Ohio and the Mississippi, without producing an essential diminution of the canal revenues, the report adds:—

"A reduction in the rates of toll might be desirable, from its beneficial influence upon trade, even though the revenues of the State should be diminished by the operation. The revenue from tolls is a minor interest, when compared with the twenty millions in value of products coming to market, the sale of twenty or thirty millions of merchandise,* and the benefit derived by our citizens from the transportation of this property upon the river, and the canals and the lakes. Notwithstanding the great reduction in the rates of toll heretofore made, the aggregate amount of revenue from the canals for three years, since the reduction commenced, exceeds the amount for three years at the old rates by the sum of *more than a million of dollars.*"

The same report states that "the rates of toll on sawed lumber were reduced in January, 1835, from eight to five mills per 1,000 feet per mile. This reduction is calculated to produce a serious diminution in the revenues of the Champlain and the lateral canals, as they furnish three-fourths of the lumber coming to tide water. The quantity of lumber coming to market has increased from 107 millions in 1834, to 185 millions of feet in 1835.—The Champlain canal has furnished more lumber for the last season than the whole quantity which came to tide water in the preceding season. The increase is to be ascribed mainly, perhaps, to the high price paid for this commodity in market; but the reduction of tolls has undoubtedly had considerable influence in increasing the quantity. The rate of tolls on shingles was reduced at the same time from two mills to one mill per 1,000 per mile. The number of shingles coming to market has increased from 34 to 51 millions. These were the only material alterations made in the rates of toll in 1835.

To be continued.

Common Meridian for all Nations.

We find it stated in the French journals, that in consequence of the confusion existing between the maritime calculations of different powers, and the unfortunate occurrences to which it sometimes leads, the naval powers of the north—Russia, Sweden, Denmark, and Holland—have entered into an agreement to open conferences on the old question of a common meridian for all nations. France, Spain, and Portugal, it is said, have given in their adhesion to the scheme; and a hope is held out that England will come into the arrangement.—There never has been, and there never can be, a doubt as to the utility to science of common points of reference and uniformity of regulation; and no local jealousy should be allowed to stand in the way of them. The most advanced opinion on the Continent seems to be in favor of the selection of an entirely neutral point of intersection—say Cape Horn—which would have the immense advantage of being agreeable to the Americans. If the Admiralty are disposed to go with this movement, there seems a probability of establishing once and for ever this great maratime desideratum.—*London Athenæum.*

* The value of products coming to tide water for the last four years averages more than fifty-six millions of dollars for each year. And the value of merchandise transported on the canals for the same time, averages seventy-five millions for each year.

Finances of Maryland.

Under the following heads: Amount.	Description.	Annual interest.	State Tax.	Net Amount.
4,779,125 22	5 per ct. Stg.	272,170 00	12,655 00	259,515 00
4,067,037 20	6 per ct. Cur.	244,022 23	10,167 59	233,854 64
2,778,219 04	do	138,910 95	5,903 71	133,007 24
100,000 00	4½ do	4,500 00	200 00	4,300 00
500,000 00	3 do	15,000 00	750 00	14,250 00
12,224,381 46		674,603 18	29,676 30	644,926 88

The funded debt of the State is $15,424,381 46
From which deduct the loan to the Baltimore and Ohio railroad company 3,200,000 00
$12,224,381 46

This interest on the sterling stock varies with the exchange on London; 10¼ per cent was estimated.

The average interest on the above stocks after deducting State tax is 5 276-1000 per cent.

Of the above stocks there were issued for the Baltimore and Ohio, the Baltimore and Washington and the Baltimore and Susquehanna railroad companies and for the Susquehanna and Tide Water Canal company, the following:

	5 per ct. Sterling.	6 per ct. Currency.	5 per ct. Currency.	4½ per cent.	3 per ct.	Total.
Ohio R. R.	1,000,000	497,000	500,000	100,000	500,000	497,000
Washington R.R.						500,000
Susquehanna R.R.		1,543,334	88,711			2,232,045
Tide Water Can'l						1,000,000
Total.....	1,000,000	2,040,334	588,711	100,000	500,000	4,229,056

The State pays interest on the above..... $232,105
Less State tax..... 9,563
$222,542

The amount that will be paid by the above companies during the present fiscal year to the State is estimated at from tax on passengers, Washington Railroad..... $52,000
From dividend " " 27,500
" " Baltimore and Ohio railroad in stock 7 per cent at 75 cents..... 26,250
" interest Baltimore and Susquehanna railroad..... 113,000
" interest Susquehanna and Tide Water canal..... 66,924
285,974

Deduct interest paid by State for said companies, see table B..... 222,542

Excess paid by companies over State's interest..... 63,132

In addition to the payment by the Susquehanna and Tide Water canal, it will make a further payment of $33,000 on account of arrears of interest.

The above excess of $63,132 of payment over the State's interest is made

By Baltimore and Washington railroad company.....		53,438
By Susquehanna and Tide Water canal company.....		13,424
		$66,862
Less deficiency by B. & Ohio railroad.....	$2,328	
Less deficiency by B. & Susquehanna railroad.....	1,402	3,730
		$63,132

D.

Statement showing the actual amount of funded debt for which the State has to provide funds for the payment of interest other than those furnished by the railroad and canal companies.

Amount of debt see table A.....	$12,224,381 46	
Deduct amount funded for interest as balance on hand to Dec., was sufficient.....	133,712 82	
		12,090,668 64
Deduct amount issued for the above companies, as they pay more than the interest on the same.....		4,229,045 00
		7,761,623 64
And deduct the principal, covered by the excess, table C, $63,132, at 5 276-1000 per cent.....		1,196,588 64
Leaving for the State to provide for.....		6,665,035 00
And if the sinking fund is deducted.....		2,003,016 00
Would leave to be provided for to pay interest from the various taxes, only the sum of.....		4,662,019 00

E.

But as the sinking fund is sacred, and not to be diverted from its purposes, it will be necessary to assume the debt as amounting to...	$6,665,035
The annual interest on which is...	352,754
The other expenditures of the State as per F. annexed are.....	258,073
Total expenditures.....	$610,827

The receipts from all other sources except interest received fm. the above companies, and direct tax, see table G., are....	$525,000	
The direct tax..	460,000	985,000
Leaving a surplus of.....		$374,173
To which add balance on hand December 1st, 1850.....	$245,409	
Less appropriations not paid..	34,373	
And arrears of interest.....	133,712	168,085 77,324
		451,497
And adding the annual interest on the sinking fund, say $2,000,000, at 5 276-1000 per cent.....		105,520
Gives the handsome sum to be added annually to sinking fund of.....		557,016

—*Baltimore American.*]

Coal Mining in Maryland.

The coal companies of the Cumberland district are now making preparations to commence mining for the ensuing season on a large scale. In relation to two of these companies, we copy the following paragraphs from the Cumberland Civilian:

Maryland Mining Company.—This company is one among those most actively engaged in the transportation of coal in this region. They own fine coal lands connected with the canal by a railroad, at the terminus of which is a commodious basin, with fixtures, already completed, for loading. The works and railroad cost $300,000, and the active capital employed amounts to $75,000 more.—For the year ending June 1st, 1850, this company transported to market 105,000 tons of coal, employing 60 men at an average rate of wages of $25 per month.

Frostburg Coal Company.—This has for some time been engaged in the successful mining of coal. The cost of their coal lands was $100,000; the cost of their railroad horse power, added to their active capital, makes the sum of $50,000. They employ 40 hands, at an average rate of wages of $30 per month, and for the year ending June 1st, 1850, sent to market 59,000 tons of coal.

Population of New Hampshire.

The following is the population of New Hampshire by the late census:

	1850.	1840.
Rockingham.....	49,215	45,791
Strafford.....	29,359	23,149
Belknap.....	17,722	17,989
Carroll.....	20,166	20,182
Merrimack.....	40,346	36,283
Hillsborough.....	57,480	42,345
Cheshire.....	30,141	26,430
Sullivan.....	19,376	20,318
Grafton.....	42,343	42,200
Coos.....	11,853	9,836
	318,001	284,523

Grand total of the State, 318,001—a gain since 1840 of 33,478.

In the counties of Belknap and Sullivan, it will be seen that there has been a small decrease of population.

Annual Report of the Commissioners of the Canal Fund.

STATE OF NEW YORK CANAL DEPARTMENT,
Albany, January 22, 1851.

To the Honorable the Commissioners of the Canal Fund:

The auditor of the canal department, in compliance with the statute, respectfully presents a statement of the receipts and payments on account of the canals and the canal debt, and the balances of the funds on hand, the depositories of the same, and the condition thereof, for the last fiscal year:

The balance of canal funds on hand on the 1st October, 1849, consisted of—		
Deposits in banks.....	$1,725,136 68	
Investments, securities in canal department.....	483,089 49	
	2,208,226 17	
The receipts during the year have been.....	3,714,376 67	
	6,922,602 84	
The payments during the year have been.....	4,895,688 12	
	1,026,914 72	
Due from the general fund.....	4,596 99	
Total balance at the close of the year.	$1,031,511 71	
Of this balance there is deposited in banks.....	817,483 39	
Invested in bank fund stock.....	209,431 33	
Due from the general fund.....	4,596 99	
	$1,031,511 71	

REVENUES AND EXPENDITURES OF THE FISCAL YEAR.

Statement of the revenues of the State canals, and the expenses of collection, superintendence, and ordinary repairs, during the fiscal year ending the 30th September, 1850.—Art. 7, sec. 1, of the constitution.

RECEIPTS.

Tolls.....	$3,390,476 63
Rent of surplus water.....	2,604 74
Interest of current canal revenue, etc.	93,090 93
Revenues.....	$3,846,172 30

PAYMENTS.

For repairs on canal, viz:		
To superintendents of repairs	$560,845 62	
To canal commissioners	9,108 98	
	569,954 60	
For expenses of collection of tolls, viz:		
By collection of tolls	$48,904 57	
By weigh masters	6,081 93	
	54,986 50	
For tolls refunded	3,137 32	
For printing	1,308 94	
For salary of auditor and clerks of the canal department	7,187 72	
For miscellaneous payments	8,186 92	
		644,762 00
		$2,841,410 30
Payments by canal commissioners for new work on the lateral canals, under special laws, viz:		
On the Oswego canal	82,507 60	
On the Cayuga and Seneca canal	58,443 77	
On the Chemung canal	40,991 10	
On Crooked Lake canal	9,261 25	
		191,203 81
Surplus revenues		$2,650,206 49
Amount set apart by article 7 of the constitution, to pay the interest and redeem the principal of the State debt, and for the support of government, viz:		
For that part of the debt, called the canal debt, sec. 1	1,300,000 00	
For that part of the debt, called the general fund debt, sec. 2	350,000 00	
For the general fund, to pay the necessary expenses of government, sec. 3	200,000 00	
	1,850,000 00	
The "remainder of the revenues" of the fiscal year, applicable to the completion of the Erie canal enlargement, Black River and Genesee Valley canals		$800,206 49

COMPLETION OF THE CANALS.

From the foregoing statement of the revenues and expenditures of the year, the surplus applicable to the completion of the canals appears to have been $800,206 49, to which is to be added the sum of $7,969 16, paid out of the tolls of the previous year for extraordinary repairs, and now restored to the fund for the completion of the canals, making the sum of $808,175 65 to be applied to that object. In my last report the surplus was estimated at $942,000. There is, therefore, a deficiency of anticipated means of $133,824 35. The appropriations previous to 1850, had exceeded the revenues applicable to meet them, by the sum of $202,425 78. The legislature last year appropriated $944,000 of the surplus revenues to the completion of the canals, which exceeded the estimated amount for that object, after supplying the deficiency of the revenue of the previous year to meet the appropriations, by $202,425 78, and exceeded the actual means, after supplying such deficiency, by $338,250 13, leaving that sum to be supplied from the surplus of the current fiscal year, to meet the appropriations already made.

ESTIMATE FOR THE FISCAL YEAR.

I estimate the revenues of the present year at $3,342,000, and the expenditures for collection, repairs, etc., at $750,000. After deducting the constitutional appropriation to the canal debt sinking fund of $1,300,000, and the contributions to the general fund of $550,000, this estimate leaves a surplus for the unfinished canals of $742,000. Of this surplus $338,250 13 will be required to make good the deficiency of last year, and only $403,749 87 can be considered under the control of the present legislature.

The appropriation of last year for repairs proved inadequate, and it became necessary to throw the payments for September forward upon the appropriation for this year. This was done, by inducing one of the deposite banks to hold the drafts for the month till the appropriation became applicable for their payment.

The appropriations for repairs ought to be large enough to meet every demand upon them. Economy cannot be enforced in the repairs of the canals by any restriction in legislation. The constitution provides that the current expenses shall be paid first of all, as it is obvious that they must be, or our whole reliance for revenue would fail. No foresight can guard against the effects of such storms and floods as prevailed during the last season; and as the damages they occasion must of necessity be repaired, it is very desirable that the symmetry of our accounts should be preserved, and every expenditure paid from the treasury at the time it is made, and not have those of one year thrown upon the next, which necessarily shows, in the account of payments, an untrue statement of actual transactions.

The tolls of the present year are estimated at $90,000 less than the receipts of last year. Under the law of last year, exempting certain live stock and fresh meats from toll when conveyed on railroads, it is already certain that there will be a considerable diminution in railroad tolls. The consolidation of four of the toll paying railroads into two under the provisions of law in regard to local freight, also reduces our receipts from those companies. The statutes in relation to tolls on the railroads need revision and amendment. The Northern railroad is completed, and is already manifesting its ability to draw profitable employment from the business heretofore tributary to our canals. When navigation opens in the spring, we shall find the New York and Erie railroad on the shores of Lake Erie, completed in its whole extent, contending with us for the transportation of the accumulating products of the west. If, under this powerful competition, our tolls do not recede more than $90,000, it will be the greatest triumph of our canal policy that has been achieved in its beneficent history.

The wise liberality and enterprise of the State of New York, in the construction of the Erie canal, opened the prolific west to easy settlement and profitable cultivation. Richly freighted vessels and steamboats now cover the waters of lakes and rivers, where the whole tonnage would have been confined to rafts and canoes but for this great work.—The accelerated growth of the west, dependent upon the facilities proffered by the people of this State, has enabled industry and capital to penetrate remote regions with solid iron roads and rapid engines, earning rich rewards for outlay and toil, where otherwise the forest path and prairie solitude would still have been trod only by the adventurous hunter. It is the province of the wisdom and justice of the State to provide for the permanent maintenance of the ascendancy, now long enjoyed by our great artery of trade, as a channel of intercourse between the States peopled by its means and the Atlantic. This object would now have been placed beyond all contingencies, if the work of the enlargement had not been unfortunately arrested. If the enlargement was now completed, it would be entirely within the control of the State to accommodate all the carrying trade between the Atlantic and the lakes, at rates so cheap as to preclude the idea of competition, and at the same time to secure a revenue sufficient to discharge the public debt, and relieve the people from the burdens of taxation for all time to come. The instant completion of the enlargement would, if practicable, be cheaply purchased at a cost of twenty millions;—but a far less sum is required to effect it, and the most deeply interesting inquiry in the present policy of the State is, how most economically and speedily to effect this great object. The present estimates require for this work the sum of $11,000,000. Allowing $750,000 a year under the constitutional arrangement, we must wait more than 14 years before the consummation of the work.

In the meantime, while the capacity of the canal remains limited, its revenues are endangered by the active competition before referred to, and by the no less ambitious efforts of the Canadians to attract business through the costly work with which they have united the St. Lawrence to Lake Champlain.

It is in the power of the State to make this competition subservient to the great purpose of completing her own improvements, by exacting equitable tolls for the transportation of property through her limits, on the thoroughfares which are the legitimate offspring of her munificence.

Nor could it be a fair subject of complaint on the part of our railroads, or the people of the west, if this State should exercise its just power in this respect, and not suffer them to enter upon an unrestricted rivalry with the canals [to which they owe the strength and wealth which have called them into being] until the canals themselves shall have been completed.

Whether any other means than wisely protecting and husbanding the canal revenues, can be devised to secure an immediate completion of the enlargement, is a consideration addressing itself with peculiar force to every responsible department of the government, and to the people.

In connection with this subject, it seems appropriate to present a view of the progressive advancement of the canal revenues from the opening of the Erie and Champlain canals. The canal board, in 1840, presented to the Assembly an elaborate report on the prospective revenues of the canals, in which they arrived at the conclusion, from their past history, that it was prudent to anticipate, at least for the period of seven years, an increase of the tolls of the Erie and Champlain canals, at the rate of seven per cent. per annum, for each period of seven years—that is to say, that the general result for seven years would be equal to what the tolls of each year would amount to, calculated at that rate of increase from the seventh preceding year. The actual result of the seven years embraced in their estimate fell short of their anticipations only a little more than half a million of dollars, in a gross amount of nearly $14,000,000. This is a remarkable close approximation to actual results in an estimate for so long a period, embracing transactions of such magnitude. But the results of further experience more fully justify the general correctness of the views exhibited by the board. Bringing forward the computations on the basis of the same estimated rates of increase, it is found that in the whole period from the opening of the canals, including 1850, the actual revenues of the Erie and Champlain canals have exceeded the progressive increase, at seven per cent. per year for each period of seven years, by the sum of $1,782,440.

The calculations of the canal board were based upon the rates of toll then established upon the canals. Since that time large reductions have been made in the rates of tolls, which, of course, greatly modified the results I have stated.

But, heretofore, every modification and reduction of our canal tolls has been made (whether judicious or otherwise), with reference to favorable effects on the revenue. Now, for the first time in the history of the canals, the question is presented whether they can maintain their business against powerful and active rivalry.

Without this rivalry, I should not hesitate to assume with entire confidence, that the general rate of increase at seven per cent a year, for succeeding periods of seven years, would be maintained by the Erie and Champlain canals, for another quarter of a century, if the tolls should continue to be established from time to time, on a revenue basis.

The present must be regarded as an interesting period in the history of the canals. Hitherto their prosperity has been uninterrupted; and so certain in prospect from year to year that their friends have never been oppressed with an anxious thought in regard to their increasing value and usefulness. I am impressed with the belief that it depends upon the wisdom of the State, now, by adopting expeditious means of giving the Erie canal the full capacity of its enlarged size, to perpetuate the augmenting value of this rich possession. Otherwise, apprehensions are not unreasonable that the point has been reached where a long pause must be made.

Whatever the future may have in store, it will

not be uninteresting, at tha close of the first quarter of a century after the opening of the Erie and Champlain canals, to look back at the results of their construction upon the finances of the State, and compare their income from one period to another.

To be continued.

Pennsylvania.

Pennsylvania Railroad.

The Philadelphia papers published last week the annual report of the board of directors of the Pennsylvania railroad company—extending from Harrisburg to Pittsburg. The statement of its affairs includes a period of fourteen months ending on the 31st of December, 1850. We extract some passages from the report which show its progress, condition and aims:

The report of the Treasurer shows the receips of the company, on account of capital stock to the latter date to have been	$5,822,210 00
And the Disbursements	5,095,546 12
Leaving a balance of	$726,663 88
Which, with the amount of subscription yet to be collected	1,013,640 00
Constitutes the available means of the company for the prosecution the work	$1,740,303 80

The eastern division of the road has been completed to the Tyrone Forges, in a manner entirely satisfactory to the board, and will not, in their estimation, suffer to contrast with any other railroad in the country.

Upon the western division, the work thus far has been well done, and has been executed as rapidly, except a few sections, as was deemed consistent with durability.

The board have contracted upon favorable terms for a sufficient quantity of iron for the superstructure of the western division. While an honest State pride is gratified in adverting to the fact that the road is thus far constructed exclusively of Pennsylvania material, the board have no hesitation in expressing their full conviction that the difference in price will be more than counterbalanced by the superiority of our rails over the best of those recently imported for other roads. The contractors, as an evidence of their own confidence, bind themselves to replace, without charge, all rails which shall give way within five years, from an original defect.

The eastern division of the road was opened for use to the Portage intersection, one mile west of Hollidaysburg, on the 17th of September last, too late to secure to the company the full benefit of the fall trade and travel, and the Portage railroad was closed for repairs, by order of the canal commissioners, on the 17th of December.

During the months of October, November and December, the net receipts for passengers and freight were $42,084 84, equal to an annual interest of $3.82-00 per cent upon the cost of this division, including the Hollidaysburg branch, with the interest thereon chargeable to construction, and of all the cars, locomotives, machinery and fixtures in use. The result induces the board to believe that the road will, during the current year, earn 6 per cent upon the cost of whatever portion may be brought into operation, and that it will henceforward yield an equal or larger per centage upon the whole outlay, productive and unproductive after making proper provision for depreciation, by the creation of an ample contingent and renewal fund.

The local trade and travel increase so steadily as to leave little room for doubt that they will, in a few years, be adequate to the support of the road, and the payment of interest upon its cost. Even now the receipts at stations which had no name when the road was located, exceed those at some of the largest towns upon the Juniata.

All other things being equal, the geographical position of Philadelphia will secure to her a virtual monopoly of the trade of the west against all rivalship. That trade is, however, too tempting a prize to be permitted to remain in any hands but those which are as prompt to defend as they are able to hold it. We must look the fact in the face that it is lost in part, at least, to Philadelphia, if further delay be suffered in the construction of the mountain division of the Pennsylvania railroad.

The Baltimore and Ohio railroad is now under contract throughout its entire length; from Cumberland westward 5,000 men are at work upon it. 22,000 tons of rails have been imported for it, and the energy and sagacity which mark its management, permit no doubt that it will be prosecuted with the utmost vigor till it reaches the Ohio river. The Erie railroad, hitherto driven forward with very little regard to cost, must be completed to Lake Erie in May next, in compliance with the condition upon which $3,000,000 of State, and $750,000 of of private stock were relinquished to the present stockholders.

To compete with these unbroken lines from the seaboard to the western waters, managed, as they will be, by the ablest merchants of our sister cities, Philadelphia will have the eastern and western divisions of the Pennsylvania road connected by a link of 30 miles, embracing ten inclined planes, the crossing of which has heretofore generally consumed sufficient time to make the trip between Philadelphia and Pittsburg, upon a first class railroad, and the use of which will entirely cut off from this company one of its largest prospective sources of revenue, the transportation of live stock from points west of the Allegheny to the eas'ern grazing counties of Pennsylvania, and to the Philadelphia and New York markets.

It is suggested by the Chief Engineer, that the sum of $1,500,000 will suffice to build a road from Altona to the head of plane No. 2, by which the worst portions of the Allegheny Portage road would be avoided, and the time consumed in crossing the mountains materially reduced.

As a last alternative, this proposition might be adopted; but while the proposed connection would be, in many points of view, a decided improvement over the one now in use, it would fall very far short of accomplishing the primary purpose for which this undertaking was projected, of securing to the commonwealth and its two great cities the benefits accruing from the possession of the trade and travel of the ewst, by furnishing a route which should in all respects compare favorably with the best of its rivals. That object can never be attained, while any link, however small, shall remain under the ever-varying management incident to the incessant changes of State and local politics.

With a view to procure that result at the earliest possible day, and to promote at the same time what they conceive to be the true interests of the present stockholders, the board earnestly recommend that immediate provision be made for putting the mountain division under contract at as early a period ot the ensuing spring, as the character of the ground will permit. To build this portion of the road, and partially equip the whole, will require the filling up of the capital stock of company to the limit fixed by the recent action of the stockholders, under the authority conferred in the charter. The amount subscribed to this date is $6,835,850, which will be increased more than $100,000 by the issue of stock, deliverable upon the completion of a portion of the contracts upon the western division, leaving to be supplied a sum slightly exceeding three millions of dollars.

If we could forget what is due to ourselves, we are not at liberty to overlook our obligations to others who have united their fortunes with ours in a common destiny, and faithfully tulfilled their part of the implied contract. The extraordinary energy with which the Ohio and Pennsylvania railroad has been driven westward, has concentrated upon that improvement many smaller ones, originally projected with a view to very different connections, and created others destined to add largely to its revenues, and to those of the Pennsylvania railroad. From the present year forward that road and its countless tributaries will pour upon the western terminus of ours an immense amount of tonnage, to find its way slowly, and at a comparatively heavy cost, over a broken line, till the completion of our entire road shall open an outlet for this and other roads whose most available eastern connection is still an open question, whose capacity shall be equal to any demands which can be made upon it.

The board have made the best arrangements in their power for the transportation of merchandise and produce between Philadelphia and Pittsburg, during the continuance of canal navigation for the current year, at prices varying from 50 cents to $1 per 100 lbs.

They have fixed these rates not so much with a view to present profits as to the promotion of what they believe to be the true interests of this company, and of the mercantile community, with which it is so intimately identified. They have, after the most careful investigation and mature consideration, decided upon starting from the outset with a uniform tariff of low charges, in preference to the sliding scale, which has hitherto militated so seriously against the increase of the inland trade of Philadelphia and of the revenues of the commonwealth.

The board are gratified to have it in their power to state that they are sustained in the adoption of this system by the concurrence of the intelligent gentlemen who now compose the canal board, and that they are assured of their cordial co-operation in fixing the settled policy which shall hereafter govern the operations upon the State works, as well as those of this company.

Indiana.

Madison and Indianapolis Railroad.—Below we give an abstract of the report of this company for the past year.

The aggregate of the transportation service performed on the Madison road proper is $300,943 40.

The nett earnings on this road for the year ending Dec. 31, 1850, is $90,407 80.

The total receipts of the company, for the last year, were $687,619 89. The total expenditures $673,121 99, leaving a balance of $14,496 90.

For services performed during the past year, by the M. & I. R. Co., the Bellefontaine, the Terre-Haute, the Shelbyville, the Knightstown, the Rushville, and the Peru railroads were indebted $19,-798 39, of which $15,555 72 has been paid.

The increase of business on this road during the past year, presents a most gratifying result. The following table will show the increase of the leading articles of traffic, as compared with 1849. It is to be borne in mind that, before the crop of this year came into market, the freight transportation was very light; and that the comparison is very nearly that of the last six months of 1850 with the year 1849.

Items.	1849.	1850	Increase
Wheat, bushels	161,981	334,176	172,195
Corn, do	111,519	153,581	42,062
Cornmeal do	3,604	19,951	16,347
Bacon, hhds	1,342	1,765	423
Bacon and pork, in bulk, lbs	454,398	854,333	399,935
Live hogs	52,044	93,949	41,895
Lime, bbls	142	8,763	8,621
Stone, tons	88	2,127	2, 39
Outward mdze lbs.	18,602,806	24,537,357	5,924,551
Inward "	1,329,251	2,068,747	737,496

There is a small decrease on flour, oats, and barrel pork. The whole freight transportation would have been largely increased had the company possessed the power and the cars to perform the service.

The passenger transportation of the two years compares as follows:

No. of passgrs in 1850.	64,986	Revenue.	$87,465 90
" " 1847.	52,894	" ..	77,996 53
Increase	12,092		$9,459 37

The produce transported over the Shelbyville and Rushville railroad, from the commencement of operations to the first of January, 1851, is as follows:

Wheat, bushels	50,378	Corn, bus.	14,615
Potatoes, bbls	200	Oats	365
Apples, do	316	Dried apples bus	10
Butter, do	5	Brooms. dozen.	90
Eggs, do	2	Flaxseed, bus.	70

The gross receipts of the Madison and Indianapolis railroad, for the week ending January 18th, amounted to $8,133 82. The business of the week ending to-night will foot up like a sum.

Lafayette and Michigan City Railroad.—We learn that the gentlemen who represent the interest of the Michigan and Southern railroad company at Indianapolis, have agreed, as one condition to obtain the right of way across the State for that company, to build a railroad from Lafayette to connect with Michigan City, within four years from this time. If the right is granted to any company we hope this provision will be made secure. The connection of that road with this city would be one of its most, if not the most important branch they could construct. It would divert a large portion of the travel which now seeks other communications, to that route, and be a connecting link with the roads which will concentrate here. This condition should not be deemed onerous, but one that will be equally advantageous to the company, as to this section of the State.—*Lafayette Courier.*

Ohio.

Steubenville and Indiana Railroad.

We have the first annual report of this company which has for its object the construction of one of the five great lines of railroad running east and west through the eastern part of Ohio. At Newark it will unite with the Central railroad.—The length of the road will be about 121 miles, and the distance from Steubenville to Pittsburg, is about 40 miles, making the entire distance from Pittsburg to Newark by this line, 161 miles.

Below we give a portion of the report of tne company relative to the route, business prospects, etc., etc:—

It is a wellknown fact that the country bordering on the Ohio river, and extending for a distance of from twenty to forty miles parallel with the river, presents the feature of lofty hills broken by the intersection of numerous and deep ravines. These ravines being formed by the various currents of water flowing into the Ohio, their general direction, and that of the accompanying ridges, is at right angles with the river. Hence, in selecting the location for a railroad extending from the river into the interior of the State, the valleys of these affluents must be adopted as the routes by which the hilly region bordering the Ohio must be passed. The valleys which present themselves as adapted to this route are those of Cross Creek, Connotton, and Stillwater, which empties into the Tuscarawas, thence with the valley of that stream, and by one of its tributaries, into the valley of the Scioto.

This route has been surveyed by two competent and experienced engineers, in two distinct surveys, the results of which we will here present.

The first survey was made by Doctor Charles T. Whippo, of Pennsylvania, a gentleman of well known reputation and high character as a civil engineer, and the result is thus briefly summed up in his report:

"It will be perceived by the following table of grades, that our highest grade is upon 19¼ miles, and that upon the remaining portion of the line it will be very light—averaging 11 to 22 up to 26 feet. The grade from Urichsvile to Coshocton will be less than three feet to the mile, and that from Coshocton to Mount Vernon, five feet per mile.

TABLE OF GRADES.

Plane No.	Distance.	Grade to mile.
1	3 miles 360 feet	11.22 feet.
2	3 " 1,224 "	22.89 "
3	1 " 984 "	18.54 "
4	0 " 2,160 "	22.00 "
5	1 " 768 "	14.84 "
6	2 " 1,104 "	15.84 "
7	1 " 4,656 "	15.94 "
8	1 " 768 "	14.84 "
9	1 " 3,144 "	25.69 "
10	1 " 1,624 "	22.15 "
11	6 " 1,368 "	*30.55 "
12	4 " 2,208 "	†30.55 "
13	9 " 2,808 "	5.38 "
14	3 " 579 "	‡36.35 "
15	0 " 1,296 "	00 "
16	5 " 2,976 "	§30.55 "
17	3 " 144 "	7.03 "

*Ascending Cross Creek summit.
†Descending into Connotton.
‡Ascending Connotton summit.
§Descending into Stillwater.

"It may be remarked that we have favorable ground for the construction ot a railroad upon the entire route, with the exception of 15 miles in the Cross Creek valley, and the deep cuts at the two dividing ridges alluded to."

The following report is from Jacob Blickensderfer, Jr., the chief engineer now in the employ of the company, and at this time engaged, with a competent corps and two experienced assistant engineers, in the service of the company. Mr. Blickensderfer's long connection with the public works of Ohio, and his known character as an able engineer are a sufficient guarantee for the accuracy of his statements:

"D. Kilgore, Esq., President:

"Sir—From the examinations which have been made, I do not hesitate to say that an excellent road can be built on the route of the Steubenville and Indiana railroad, at a reasonable cost. The route is in many respects much easier than was expected. The ridge dividing the waters flowing into the Ohio from those flowing into the Tuscarawas is lower and more easily crossed, and the curves and grades will be better than I had supposed.

"The surveys have not arrived at that state of forwardness which enables me to give statements in detail, showing all the features of the road, but its general characteristics have been fully developed.

"The distance from Steubenville to Coshocton, by the route of the Steubenville and Indiana railroad, will be about 81 miles. Of this portion of the road more than one half lies in the valleys of the Tuscarawas and Connotton, on ground admitting of the construction of a road at a very reduced cost, with easy curves and grades, probably in no case exceeding 10 feet per mile. The more easterly portion of this line, comprising the first 36 miles from Steubenville westward, situated in a more broken country, will be somewhat more expensive, but even here the cost of construction will be within moderate limits, and the curves and grades favorable.

"In no instance will grades exceeding about 39¼ feet per mile be required. The minimum radius of curvature will not be less than 1500 feet, and may perhaps be increased to 1910 reet.

"Between Coshocton and Columbus the road will also be of easy construction, with favorable curves and grades; and I am satisfied that the entire road from Columbus to Steubenville will be of a character which will compare favorably with any other line of communication between the interior of the State and the Ohio river, and a large proportion of it, (being that part situated in the valleys of the Muskingum, Tuscarawas, Stillwater and Connotton) will be equalled by few other roads in the State.

The natural direction of trade for the exports and imports of Cantral Ohio is by this route.

Other things being equal, trade will take the shortest and cheapest route to a market. Since the construction of the New York and Ohio canals, they have afforded the cheapest, though not the shortest, route for the trade of central Ohio. Hence, although Philadelphia is the nearest, and that which nature seems to have designed as the proper market for central Ohio, yet New York and Boston have nearly monopolised its trade. It can only be restored by the construction of roads possessing superior advantages to those leading northward. Not only will Philadelphia find this necessary in order to recover the trade which she has lost, but even to retain that which she now possesses. The only part of the trade of Ohio, which now goes to Philadelphia, is that from the counties bordering on the Ohio river. So soon as the Wellsville and Cleveland road is in operation, a great part of this will leave the river at Wellsville, instead of passing on to Pittsburgh. This must necessarily tend to divide the trade which Philadelphia and Pittsburgh still derive from the west; and in a low stage of the Ohio, nearly all of it will leave the river at Wellsville.

It is claimed that the Pennsylvania and Ohio road will secure this trade to Pittsburgh and Philadelphia. There can be no doubt but that this road will open to Pittsburgh an immense market for her manufactures of iron, glass, cotton, &c., which may amply remunerate her for its construction. But will it divert the exports of central Ohio, Indiana, Illinois and Missouri, from New York and Boston, to Philadelphia? A glance at the map will show that in order to reach Pittsburgh by this route, the entire trade of this region must pass the point of intersection of the Columbus and Cleveland road at Galion. This is 72 miles from Cleveland, on a dead level and without a curve.

This distance from Galion to Cleveland will be run in 2¼ hours. From Galion to Pittsburgh the distance is 180 miles, *on a serpentine road, with grades of fifty feet to the mile.* It may be run in 9 hours, making a difference of 6¾ hours in favor of Cleveland.

This 6¾ hours will carry the trade to Buffalo in the same time required to carry it to Pittsburgh. The distance from Buffalo to Albany is 327 miles; from Pittsburgh to Philadelphia, 355 miles; difference in favor of Albany, 28 miles.

But when it is recollected that Albany is much nearer to the Boston and New England markets, the great consumers of western produce, than Philadelphia is; and that flour and wheat always command a higher price at Albany than at Philadelphia, it is not difficult to answer the question whether the Pennsylvania and Ohio road will divert this trade from the northern markets. The entire trade of central Ohio, Indiana, Illinois and Missouri, in order to reach Pittsburgh by the Pennsylvania and Ohio road, *must pass this point of intersection at Galion.* This is unavoidable. Once at Galion, no one can doubt for a moment, if he will look at facts and figures as they exist, what direction the trade would take from that point eastward. Galion is too near the lake for Philadelphia to attempt to divert a trade, once there, from New York and New England influence. Galion is within a circle of that wide-spreading whirlpool which carries all that it reaches to these northern markets.

The counties traversed by this line are Jefferson, Harrison, Tuscarawas, Coshockton, Licking and Franklin, embracing an aggregate of 1,974,000 acres, valued at $26,884,000, and with a total valuation of $42,132,000, and with a population of 172,201. A portion of the trade of these counties would be shared by this, in common with other roads; but it is believed that this would be made up by what would be attracted to it from other counties. The line traverses an excellent farming region, and in addition it passes through one of the great coal fields of Ohio. In relation to this the report speaks as follows:

But there is another fact, of immense importance, which should not be omitted in stating the comparative advantages of this route for a railroad. It is this: *It traverses one of the best bituminous coal regions in the United States.* From the Ohio river westward to the Tuscarawas, a distance of over 50 miles, the whole abounds in coal, of the best quality, and easily mined. To the west of the Tuscarawas valley, *no coal is found.* Hence a large trade in this article would be at once opened, between eastern, and central and southern Ohio. This trade would pass in an opposite direction to that of the agricultural products exported, *thus giving full employment to the road in both directions.*—No estimate can be formed of the amount of this coal trade, as all experience proves that the consumption of coal increases precisely in the ratio that you reduce its cost. When it is recollected that railroads of equal extent, and much greater cost than this, have been constructed and found profitable for the exclusive business of transporting coal; and others for the exclusive busines of transporting agricultural products, which have also proved profitable, who can doubt the result, when both these advantages, in their greatest extent, are combined in the one road? No other road, in the entire west, or perhaps in the United States, embrac-

es, to an equal extent, resources in local trade, which this one undoubtedly does.

But we must not overlook the *through travel and trade* which the road would also command. Most of the travel between Pittsburgh and Cincinnati would certainly be diverted from the circuitous river route, to this road. *Time* is the great element to be saved in travel. The distance saved over the river route would be 190 miles. The time would be about 24 hours on each trip. This saving, in both distance and time, would command the travel. A low estimate would place the amount of travel at least at 100 passengers daily each way. This would itself more than sustain the road.

Our road, therefore, will command three distinct and independent sources of profit, either one of which would be more than adequate to make it a paying investment. These are—

1st. The local produce business and way travel of the country traversed.

2d. The coal which it would transport.

3d. The through travel and trade which it would command.

AMERICAN RAILROAD JOURNAL.

Saturday, February 15, 1851.

Patent Machine Picket Fence

SIX DIFFERENT STYLES of this fence are now made by patent machinery; and is by far the most economical fence for *Railroads, Farms, Yards*, etc., ever yet offered to the public, costing only from 4 to 30 cents per foot, according to pattern; and is so put up as to be shipped at a trifling expense. Full particulars will be furnished, by addressing the subscriber, to whom all orders should be sent.

N. STATTON, Troy, N.Y.

The Stock and Money Market.

The past has been an uneasy week in the stock market, but the recent panic is blowing over, money is more accesstible, and speculators are again commencing operations. The tendency of prices is upward. Quotations are pretty much the same as in our last issue, though the market has fluctuated a good deal during the week. As we have before stated, the recent fluctuations have been the result of speculations, and have had but little to do with the value of securities, or to the condition of the money market. Should the influx of California gold continue, the money will remain abundant, prices of stock will be sustained and the securities will continue to command a good price. Should this fall off we may then begin to look out for a panic.

The operations which most concern our readers, are those in railroad *bonds*. A very heavy business continues to be done in these securities, and the prospective amount coming into market is very large. The communities that are now most actively engaged in railroad construction, are the new States—the people of which have accumulated but little surplus capital. The demand for capital in these is too great, and the opportunities for investment too inviting to allow any thing to be hoarded. Railroad companies consequently find it for their interest to come here for money, and pay at the rate of 8 or 9 per cent, than to attempt to raise it among their stockholders. If a western company comes into market for money with their road graded and prepared for the iron, they are considered to have made out a case, which entitles them to money, and if their routes are favorable they find but little difficulty in borrowing sufficient for their iron and equipment upon a mortgage of the road. This mode of raising the means necessary for these works is now reduced to a pretty regular system, and is likely to continue till our means are exhausted or till the country is completely covered with these works.

Since our last, several important moves have been made in railroad affairs. One is the incorporation of a company of eastern capitalists, at the head of which is Mr. Schuyler, of this city, for the purpose of building the Great Central railroad of Illinois. This company, we understand, take the lands granted by the general government, and as a consideration pay the State 7 per cent of its annual gross earnings. They are to build the road in three years. The lands well managed will probably furnish sufficient means to build the road, though not so fast as the means will be wanted. The State will probably receive a handsome income from the road and the corporators will make colossal forturns. The gross earnings of this road after its completion should be 3 or 4,000,000 dollars per year.

We learn by a telegraphic dispatch that a bill appropriating $3,000,000 for the Pacific and the Hannibal and St. Josephs has passed the senate of Missouri. We presume that there is no doubt of its becoming a law. This amount will be ample to secure the completion of both of these lines, and as the State guarantee will undoubtedly be negotiated abroad, their construction will help instead of depressing the money market. This movement on the part of Missouri will exert a favorable influence upon the securities of roads east of them, as it removes the frontier line of railroad some 4 or 500 miles further west, and gives to the railroads of Ohio, Indiana, Illinois, and Kentucky, more of a character and appearance of central and connecting lines. It is important too as indicating another stride in the great line to the Pacific. Should the general government undertake this work the Missouri roads will essentially abreviate the distance to be built.

At the present sitting of the Virginia Legislature, that State has granted important aid to two works the Manasses Gap and the South Side railroad. It has also chartered a road from the Baltimore and Ohio railroad to Parkersburgh on the Ohio. This is an important matter to the Baltimore and Ohio railroad company, as it will save the through travel the great detour by way of Wheeling. This charter will add materially to the value of the stock of the Baltimore and Ohio railroad, as it will in connection with other lines, open a direct route between Baltimore, Cincinnati and St Louis, Mo.

The New York and Erie is still much depressed, owing in part we presume to the probable issue of new bonds, to the amount of $3,500,000 to pay off the floating debt of the company and for a double track for a portion of the line. Parts of new track at various places on the line of the road will be indispensible when the whole is opened. The company are pushing forward their work with great energy. A long section west of Hornellsville is about being opened for business. The iron is also laid on a portion of the western end of the line. The company has also secured the use of the Ramapo road for the purpose of bringing their line into Jersey City, a very important matter for the convenience of travel and as offering a great saving to the company.

Since our last quotations, rails have remained nearly the same. Contracts have been made at about $40 50, though we think it very probable that some dealers would deline selling at that rate. Western railroad bonds are selling for 85 to 90 net. There is every appearance that these will continue to be in demand for some time to come.

SALES OF STOCK IN NEW YORK.

	February 7. Sales.	February 14. Sales.
U. S '67 Loan	115¼	115¼
Erie R.R.	79⅛	81
Harlem R.R.	64⅛	68
Stonington	42	43
L.I. R.R.	21⅛	21
Norwich & Wor.	61	65
Albany & Sch'y R.R.	90	
Del. & Hudson	133	
Rochester and Syracuse	112½	112½
Reading	62	63
Morris Canal	19⅛	21⅛
Erie income	91⅛	93⅛
Hudson River	79	81
" " Bonds.	103	102¼
" " 2d mor	96	
Utica and Sch'y RR.	123	123
Canton	70	62
Farmers Loan	61	66

SALES OF STOCKS IN BOSTON.

	Feb. 6.	Feb. 13.
Old Colony Railroad	68	67
Boston and Maine R.R.	105⅛	106
Eastern Railroad	103	102½
Fitchburg Railroad	111	111⅛
Michigan Central Railroad	97⅛	95
Northern Railroad	72⅛	72
Vermont Central Railroad	35¼	34⅛
Vermont and Mass. R.R.	30	29
Western Railroad	106¼	108
Ogdensburg Railroad	38⅝	37
Rutland Railroad	56	52½
Portland, Saco & Portsmouth R.R	99	99¼
Boston and Worcester Railroad.	105½	105½
Rutland Railroad Bonds	88	86
Vermont and Mass. R.R. Bonds.	89	88
Ogdensburg Railroad Bonds	99¼	99
Vermont Central R.R. Bonds	92	95
Norfolk County R.R. Bonds	63	72
Boston and Providence R.R.		85
Philadelphia, Wilm'gton & Balt.	30	31½
Concord R.R.	55⅛	55½
Connecticut river R.R.	78	76
Cheshire R.R.	63	62
Boston and Lowell	114	115
Boston, Concord & Montreal	43	43
Nashua & Lowell	108	108½
Fall River Railroad	92⅛	92½
Sullivan Railroad	19	20
Manchester and Lawrence	90	90
Worcester and Nashua	51	51

Indiana.

Lawrenceburgh and Upper Mississippi Railroad. The immediate object of this company is to build a road from Lawrenceburgh, on the bend of the Ohio, 20 miles below Cincinnati, to Indianapolis, though its title indicates a more western terminus. The length of this line is 90¾ miles, making the whole distance between Cincinnati and Indianapolis 110¾ miles. The portion between Cincinnati and Lawrenceburgh, the surveys for which are now being made, will be built by the Ohio and Mississippi railroad company. The line of this road will run through Greensburgh, the county seat of Decatur, and Shelbyville, the county seat of Shelby county. It will form a very direct, and for many years to come, if not always, the shortest line of railroad between Indianapolis and Cincinnati, and the route for a large portion of the trade between Indiana and the latter city. An examination of a map will show its very favorable position in this respect.

The grading of this road from the Ohio river to Shelbyville, a distance of 64 miles, is now under contract, and about 18 miles of the line is ready for the iron. This distance, which is by far the most expensive portion of the line, carries it to the summit of the descending ridge, between the Ohio river and the table lands beyond. When this point is gained, the construction of the remaining portion will be an easy task.

The present available means of the company amount to about $400,000. This sum will be largely increased as the work progresses. Sufficient can be raised along the line of the road to prepare it for the iron, which the company, we presume, propose to purchase with the proceeds of their bonds.

This road will traverse what is known to be one of the best portions of Indiana. Its friends claim it to be the appropriate, as it will be the shortest route, by which the trade and travel of that State can reach Cincinnati; and will also form a part of the trunk line between that city and the South Shore of Lake Michigan, which must always be one of the most important routes in the United States. In this direction, the Lafayette road is the natural extension. It will also form a part of the shortest through line which for years can be made between Cincinnati and St. Louis. The great through line of travel between these cities will always, we have no doubt, be through Indianapolis. The completion oi the Ohio and Mississippi road, must, for aught we see, be indefinitely postponed, unless Illinois changes her present "protective policy," as it is termed, which at present refuses a charter for any line below the Terre Haute and Alton railroad.

North Carolina.

At the recent session of the legislature of this State, the following acts in relation to railroads were passed, viz: an act authorising the Seaboard and Roanoke railroad company to issue bonds to the amount of $400,000, at seven per cent. interest, payable in the city of New York in 1860.

2d. Authorising the Wilmington and Raleigh railroad company to increase its stock to the sum of $2,500,000.

3d. To incorporate the Newbern and Central railroad company, for the purpose of constructing a railroad from the town of Newbern to where the North Carolina railroad crosses Neuse river.

4th. To incorporate the Roanoke Valley railroad company to construct a road from Clarksville, Va., to the Raleigh and Gaston road, to connect with the same in the vicinity of Ridgeway.

Virginia.

The railroad interest seems to be predominant in this State. Against the recommendation of the Governor, in his recent message, the Legislature have just decided to subscribe two-fifths of the captal stock of $800,000 of the Manassas Gap railroad company, which is engaged in constructing a road from Alexandria into the valley of Virginia, above Winchester. At the present session, the Winchester interest defeated a bill giving the aid now granted. The amount subscribed by the State will secure the completion of the work into the valley, which will in time undoubtedly be extended to Staunton.

The State has also subscribed the sum of $300,000 to the South Side railroad, which extends from Petersburgh to Lynchburgh. This amount will be ample, with the means at command of this company, to complete the road. The line of this work follows nearly a west course. It traverses one of the best portions of the State, and is regarded a very important work for Petersburgh, in bringing her into direct connection with the Virginia and Tennessee railroad, and the great southern line of which that is an important part.

Another very important movement is the granting a charter to build a road from the Baltimore and Ohio railroad direct to Parkersburgh, on the Ohio. The Wheeling interest has heretofore been strong enough to defeat this charter. This new extension gives symmetry and shape to the whole line of railroad from Baltimore to the Ohio river, and is of immense importance, both to that city, and to the Baltimore and Ohio railroad. We can have no doubt but that company will take measures to secure its speedy construction; as it will open, in connection with the Hillsboro' and Belpre lines in Ohio, a continuous and a very direct route to Cincinnati.

All the great lines of railroad in progress in the State of Virginia with the exception of the extension ot the Central, from Staunton to the Ohio, have now secured the aid of the State, sufficient to secure their vigorous prosecution and speedy completion. Whether the Central will yet succeed in obtaining a like aid remains to be seen. Virginia is now in a fair way to be pretty well off for railroad accommodations. These will give an immense impulse to all her interests, and we may soon expect to see that State taking a start, which upon every principle, should again place her where she once was, at the head of this great confederacy.

Ohio.

The Columbus, Piqua and Indiana Railroad commences at the Indiana State-line, (from which point it is carried to Winchester, where it forms a junction with the Indiana and Bellefontaine road leading westward—this junction line is now under contract,) and runs a due east course to the city of Columbus, the capital of Ohio, where it connects with the Cleveland and Columbus, and Columbus and Wheeling roads. At Greenville, the county seat of Darke county, *it intercepts the Greenville and Miami road*, extending to this place, (the link between Dayton and Greenville of 34 miles being nearly completed.) At the city of Piqua *it intersects the Miami Extension Canal*, the great water communication between the Ohio river and Lake Erie, having its termini at Cincinnati and Toledo. At Urbana, the capital of Champaigne county, *it intersects the Mad River and Lake Erie*, and at Columbus the Cincinnati and Xenia roads. Thus it is seen, that at four different points, on its length of 86 miles, are met the leading thoroughfares ranging the State from north to south. This link, it may be noticed, as an intercepting or intersecting line, is characteristic of nearly every other link composing this great central chain from the Ohio to the Mississippi river. This fact attending its position, clearly indicates a large and perpetual support for itself from foreign sources. The district of country through which the Columbus, Piqua and Indiana road passess, is not excelled for fertility of soil, extent of cultivation, and abundance of crops and stock, by any other in the State. The numerous valley streams including Stillwater, Miami river, Mad river and its tributaries, which drain this section of country, afford every facility for a large milling business, and every inducement afforded for a most extended trade and agriculture. Add to these, the large population of both town and county, and their extent and diversity of commerce—we see that every element of a successful traffic exists. This link, considering the lateness of its projection, is in rapid progress of construction, with the most flattering prospects of an early completion, with little or no accompanying embarrassments.

The subscriptions of stock in this road, both public and private, are nearly sufficient to prepare it for the iron, and are constantly increasing. The Engineer, A. G. Conover, Esq., estimates the graduation of the road at $4,000 per mile. At the letting of 22½ miles in December last, contracts were made much below this estimate, and this section of the road is considerably more expensive than the average of the whole line. At this letting a large portion of the stock and bonds of the company were taken by the contractors at par. The other section, of 11 miles, to complete the connection between the Mad river railroad, at Urbana, and the Miami Extension Canal, at Piqua, is about to be placed under contract, so as to put the line between these two great thoroughfares in working order at an early day. The right of way has been mostly secured along the entire line, and which has been in many instances donated, or compensated for by stock of the company.

Another link of 20 miles, between Greenville, Ohio, and Winchester, Indiana, connecting this line with the the Indiana lines of railroad, is under contract. This leaves only 14 miles of the west end of this road not under contract. The entire line being surveyed and located, those portions not yet worked, will be put in preparation for letting as early as practicable.

Missouri.

This State is about to lend its credit to the amount of $3,000,000 to aid the construction of two great lines of railway across it, one starting from the Mississippi river at Hannibal, and the other from St. Louis. This aid will secure the immediate construction of two lines of railroad to the western limits of the settled portion of the Mississippi valley.

Private enterprise will thus be adequate to the construction of railroads through all the settled portions of the territory between the Mississippi and the Pacific coast. Beyond this the general government must aid in their extension. While Mr. Whitney has been besieging government for a sanction of his mammoth scheme of speculation, railroads have been projected and are in progress which will reach some 500 miles west of his proposed terminus! The idea that government will now aid a work commencing at Lake Michigan, to run for this distance along side with lines already in progress, and which will be completed before the first blow can be struck upon the new one, is too absurd to be entertained for an instant.

The action of Missouri will give a new importence to the lines of railroad in Ohio, Indiana and Illinois, and will add not only to the value of the stocks, but will tend to give them a much higher place in the public estimation.

Wabash and Erie Canal.

The Cincinnati Gazette gives the annexed abstract of the annual report of the Trustees of the Wabash and Erie Canal: This great work of internal water communication, is now completed between Toledo, Ohio, and Point Commerce, Indiana—giving a continuous line of canal of 352 miles—268 miles in the State of Indiana, and 84 miles in Ohio. The continuation of the line from Point Commerce to Evansville, on the Ohio river, a distance of 111 miles, is all under contract—an effective force of 2,000 men has been employed upon it the past season, and its final completion in the fall of 1852 placed beyond a doubt.

This great work, so soon to be completed, will be 463½ miles in length—the largest work of the kind ever undertaken by any State in the American Union—the largest continuous artificial channel of communication on the European or Ameri-

can continents. It passes through a country of unrivalled productiveness in the substantial articles of human food, and capable of supplying a dense and active population.

From the annual report of the Trustees to the General Assembly of the State of Indiana, for 1850, we learn officially, that the canal was opened between the State-line and Lafayette on the 18th of March last, and south of that point on the first of April. It was closed on the 8th of December, having been open for navigation 261 days. From the State-line to Coal Creek, a distance of 189 miles, navigation was suspended during the season less than *two days*, and the breach which occasioned it was repaired at an expense of about two hundred dollars. Several large breaches occurred on other divisions of the canal, but taking the average cost per mile of the repairs given, during the last three years, it is less than any similar canal in the country. Merchandise, purchased in New York, was transported the past season, to Terre Haute in twenty-two days.

The revenue of the canal within the limits of Indiana the past year, amounted to $157,158 38, being an increase of $22,499 38 over the previous year.

The work upon the unfinished portion of the line was quite suspended for a time the last season, by the prevalence of the cholera, and 150 laborers fell victims to it. The liabilities of the Trustees for canal work, when the unfinished divisions shall be completed, will amount to $777,183 25. The final cost of the 190 miles under construction, as stated by J. L. Williams, the Chief Engineer, will be $2,012,085 17, while the estimated cost was $1,910,371.

We said the repair service on this canal was less than on any similar work. From the Engineer's statement, it appears that the average cost of repairs per mile, for the past three years on this canal has been $188—on the Ohio canal the average annual cost of 15 years was $394 per mile. On the Miami and Erie canal and branches, the yearly average for 15 years has been $361 per mile, and taking the entire system of canal navigation in New York for 32 years, the average annual cost per mile has been $645.

The Trustees have sold, during the past year, canal lands as follows: in the Vincennes district, 25,468 22 acres, for $52,983 76; at the Land Office at Logansport, 33,985 32 acres were sold, for which $21,675 16 was received in cash, and the balance on credit. And there was received for lands sold east of Tippecanoe, the past year, the sum of $31,800 17.

The value of the canal lands unsold, and the amount due on sales made, amounts, in the aggregate, to $1,249,030 59.

Ohio.

Bellefontaine and Indiana Railroad.—The clearing and graduation on the whole line of the Bellefontaine and Indiana railroad, 118 miles, are now under contract, and in the hands of responsible men.

This road connects at its western terminus with the Indiana railroads, now rapidly advancing to completion, and crosses about midway the railroad which has been opened several years between Cincinnati and Sandusky city.

At Galion, the Eastern terminus, it connects with the Cleveland, Columbus and Cincinnati railroad, now opened and in operation from Cleveland to Galion, 79 miles, and to be entirely finished within a few weeks between Cleveland and Cincinnati. It also connects at its eastern terminus with the Ohio and Pennsylvania railroad, extending 185 miles to Pittsburg.

The Bellefontaine and Indiana railroad is an indispensable link in the great railroad route between New York and Boston and St. Louis, and will be the means of opening to the States of New York and New England a magnificent avenue to the productive and almost illimitable valleys of the great Mississippi basin.

It is confidently expected that the great New York and Erie railroad will be completed from Piermont to Dunkirk next spring. From Dunkirk to the Pennsylvania line, and thence to Erie, the work is all under contract, and will soon be finished. From Erie to Cleveland, along the lake shore, the line is in the hands of two companies, under contract, and to be opened in 1852. From Cleveland to Galion, the line is in operation. From Galion to the Indiana State-line, the work is under contract, and its completion anticipated in 1852.—Across the State of Indiana, passing through Indianapolis, the line belongs to two companies, who have a portion in operation, and all to be finished as far as Terre Haute, on the Wabash river, in 1852. From Terre Haute to St. Louis, the surveys have been made, and it is expected that the work will be put under contract this season, to be finished in 1853, so that in two years there will be a continuous railroad from Piermont, and from New York city, by way of the Hudson River railroad, to Terre Haute, 966 miles, and in three years, to St. Louis, 1136 miles.

This grand trunk line will be intersected at numerous points, from one and to the other, with branch lines of railroads and plank roads, pouring into it the commercial tributes of a population of several millions, whose number the construction of these improved modes of conveyance must greatly augment.

The New York and Erie railroad, is a work of considerable cost, but the business daily accumulating upon it as it progresses westward, link after link towards completion, should satisfy its most sanguine friends, that its ultimate entire success is certain. Its continuation westward from Dunkirk, through Pennsylvania, Ohio, Indiana and Illinois, to St. Louis, and along the lake shore from Cleveland to Chicago, must throw upon it an immense additional tonnage, and a heavy increase of passengers; and these western works, costing only from $15,000 to $20,000 per mile, bid fair to be among the most profitable railroads in the world.

With the greatest agricultural region of our country at one end, and the largest manufacturing district at the other, this long and continuous chain of railways must prove eminently successful, and every link in it profitable. †

New York.

Canandaigua and Corning Railroad.—This road runs from Canandaigua to Jefferson, at the foot of Seneca Lake, a distance of 45 miles. The capital stock of the company is $1,600,000. The actual cost of the road is not expected to exceed one half that sum. The amount of stock subscribed is about $450,000. The company pay for their iron in bonds. The road is expected to be completed within the year.

Rochester and Niagara Falls Railroad.—We learn from the Rochester Democrat, that ground was broken on this road at Spencerport, on Thursday, by Mr. Otis, of Gates, who has the contract for the section between Rochester and Brockport. The work will be pushed along vigorously, after the machinery once gets fully in motion. The company expect to run a locomotive over the road from Rochester to the Suspension bridge on the 4th of July, 1852. Mr. John N. Drummond, city clerk, has been appointed secretary of the company.

Kentucky.

Railroad from Louisville to Nashville.—The people on the line of this road are moving in a most energetic manner in the preliminary steps of construction, and are holding meetings in the various counties through which it is to run. These bodies propose to subscribe a large amount to the stock, in their corporate capacity. This road is certain to be built at an early day, and as rapidly as the means of the company can be economically expended. The route is an easy one; and the road, when completed, will connect the southern Atlantic cities with the Ohio, and realise the old idea of the Charleston and Cincinnati railroad, once a favorite project with South Carolina, and upon which a good deal of money was expended in preliminary surveys. The present route, however, occupies a very different line from the one first proposed.

The two other projects in that State now occupying a great deal of attention, are the Covington and Lexington, and the Maysville and Lexington railroads. These, the latter particularly, are making good progress. A portion of the former is already under contracr, though we should judge the Maysville line to be much the best off for means. This line we believe has already secured means sufficient for its construction, with the use of such bonds as it may be prudent to issue. The county of Mason, of which Maysville is the county seat, has just voted a subscription of $100,000. The friends of this line are indebted in no small degree for their success, to their Engineer, L. L. Robinson, Esq., who has thoroughly canvassed the general subject of the importance of railroads before the people, as well as performed his appropriate duties as engineer.

Railroads in Virginia.—In the House of Delegates of Virginia on Monday, the bill to incorporate the Northwestern (or Parkersburg) railroad was passed—yeas 74, nays 16. Previous to the passage of the bill a "compromise ryder," agreed upon by the Northwestern members, was adopted, providing for the construction of a railroad from Three Forks, on the Baltimore and Ohio railroad, to Parksburgh, but prohibiting the use of the road until twelve months after the Baltimore and Ohio railroad shall have graded the road for two tracks and at least laid down one of them, from the point of intersection to the city of Wheeling.

The Richmond Whig, referring to this bill, has the following remarks:—

THE RIGHT OF WAY.—The important contest between the city of Wheeling and certain counties of the Northwest, which desire the right of constructing a connection with the Baltimore & Ohio railroad, will be permanently decided by the passage of a bill engrossed yesterday. This bill incorporates the Northwestern railroad company under certain conditions. Those conditions require that the Baltimore and Ohio railroad shall complete a single track, with the graduations, bridges, tunneling, and masonry necessary for a double track to Wheeling, before the Northwestern railroad company shall be authorized to use their road. The bill also provides that the Northwestern railroad should not make a double track until the Baltimore and Ohio railroad should complete a double track to Wheeling. It is also provided that the western terminus of the Northwestern railroad

shall be at some point on the Ohio river, not above Parkersburg.

The Flour Trade.

The Mississippi River and New York Canals.—What constitutes the largest portion of the exports of the Northern States is "human food," and as these exports are chiefly made by way of Mississippi river and the New York canals, it may be interesting to our readers to see what proportion our inland waters bear to that big ditch.

We copy from Hunt's Merchants' Magazine for February, the following comparative table of the aggregates of the last three years, (1848, 1849 and 1850) receipts at New Orleans to 30th September in each year; and at the tide water, at the head of the Hudson, to the close of navigation of the canals:—

	N. Orleans.	Albany and Troy.
Flour, bbls	2,312,121	8,636,207
Pork, do	1,536,817	211,018
Beef, do	200,901	264,072
Wheat, bu	852,497	8,798,759
Corn, do	9,758,750	11,178,228
Other grain, do	5,350,151	11,210,239
Bacon, lbs	135,622,515	26,364,156
Butter, do	6,215,070	61,695,942
Cheese, do	8,955,880	97,596,653
Lard, do	292,110,060	27,137,176

From the above it appears that the Mississippi has the advgntage in the products of swine, and that our canal carries more of the other articles of food.

From Lake Superior.

The Green Bay Advocate, speaking of the mining operations on Lake Superior, says that, in order to overcome the difficulty of cutting the copper into moveable masses, a gigantic furnace is now being constructed to melt them and cast them in such pieces as may be handled. The plan is tho't to be feasible, and, if successful, promises to lessen very much the expense of mining.

The vestiges of apparently very ancient mining operations continue to be met with, and in greater number and extent than any previously discovered. The age of these traces is supposed to be at least two thousand years; but their connection with a particular race has not been ascertained. There are indications, however, that the copper was carried off from the mines by the way of St. Mary's river and the lakes. The excavations found are, in some cases, such as could only have been effected by years of labor, and they have very much facilitated the miners, as well as pointed them to the best locations. It is said that a road from Green Bay to the most southerly point of Keewenaw, would be less than two hundred miles in length, and shorten the present route at least one hundred miles.

Census of Kentucky.

Total population in the State	993,344
Total number of free inhabitants	782,207
" slaves	211,237
" deaths during the year	15,271
" farms in the State	82,059
" dwellings	130,743
" establishments of productive industry	3,495
Total population in the State in 1840	779,828
Total No. of free inhabitants in 1840	597,570
" white	590,293
" slaves	182,258
" free colored persons in 1840	7,317
Total increase of inhabitants in ten years	213,516
Increase of free inhabitants	184,437
" slaves	28,979
Representative population in 1840	699,608
" " 1850	908,849

If the ratio goes up to 100,000, Kentucky will lose a member of Congress. If it does not go above 95,000, she will retain her present representation of ten members in the house.

Virginia.

Richmond and Danville Railroad.—We have received the third annual report of the directors of this company, submitted to a meeting of the stockholders, held in Richmond on the 11th of December last.

Since the preceding annual report the whole line has been located to Danville. The portion of the route which has recently been located leaves the Staunton river above the mouth of the Little Roanoke river, pursues a very direct course, about S. 32° W., and falls into the Dan river low lands near South Boston; it then keeps on or near the Dan river bottom lands, until it reaches Upper Double Creek, the valley of which furnishes an easy grade to the summit, dividing it from Sandy Creek: it here takes a course about S. 81° W., and after crossing Sandy and Cane Creeks, descends by Fall Creek (which it crosses near its mouth) to the Dan river, and crosses said river a little below the corporation line of Danville.

The total length of the road will vary but little from 140 miles, including the bridges at Richmond and Danville.

The whole amount expended on account of the construction, on the 30th of Sept. last, was as follows:

Walling and grading Richmond depot site	6,762 46
James river bridge, including foundations and temporary track for transportation of materials	90,823 90
Graduation and masonry east of Staunton river	317,102 94
Graduation and masonry west of Staunton river	22,841 43
Materials for permanent way	333,602 25
Laying permanent way	6,333 43
Water-stations, sheds, &c	192 51
Total	$777,758 92

	Miles.
Length of road and branches graded	29.5
Length of superstructure laid with edge rail	13.
Length of road partially graded, east of the Staunton river	17.5
Length of road partially graded, west of the Staunton river	3.

The following table exhibits the amount of work that had been done, and that remaining undone, on the 30th day of September, 1850, to complete the graduation and masonry of the Richmond and Danville railroad to Staunton river:—

Description.	*Amount done.*	*Am't to be done.*	*Total.*
	Cubic yds.	Cubic yds.	Cubic yds
Earth excavation	1,660,000	1,638,000	3,298,000
Rock excavation	27,615	14,350	41,965
Masonry	20,155	10,180	30,335
	Lin. feet.	Lin. feet.	Lin. feet.
Bridging	2,370	360	2,730
Ditching	184,360	559,790	744,150
Tresseling	2,930		

West of the Staunton river, the exact location of the road has not been made upon the ground, except for about three miles nearest to Danville; the quantities, therefore, in the following table, are only approximative:—

Description.	*Am't done.*	*Am't to be done.*	*Total.*
	Cubic yds.	Cubic yds.	Cubic yds.
Earth excavation	118,550	1,261,220	1,379,770
Rock excavation	250	22,450	22,700
Masonry	540	12,100	12,640
Bridging		$70,000	$70,000
Ditching	1,320	180,000	lin. feet.

The item for bridging is made up for the structures required to cross the Staunton, Bannister and Dan rivers—Fall, Sandy and Birch creeks.

Condition of the way and works on Sept. 30th, 1850.

Richmond depot site, partially walled and graded.

James river bridge finished, with the exception of 600 feet of coping over connecting walls and arches.

Tunnel under Richmond and Petersburg railroad finished.

Materials for permanent way, purchased and on hand, viz:

Plate rail for 75 miles, equal to 3,000 tons.

Pine string-pieces for 69 miles of road.

Sills or cross-ties for 51 miles, of which 59,946 are for plate rail, and 24,540 for edge rail superstructure.

It is confidently expected that Messrs. R. Harvey & Co. will, before the end of the year, finish the grading and masonry to section 39, inclusive, which will give over 45 miles of road graded, and will leave 32 miles prepared to receive its superstructure, and for which heavy rails for only 15 miles have been contracted for. If the edge rail is to be laid west of the Appomattox river, measures to procure a further quantity should forthwith be taken.

There has been expended for the purchase of furniture for the road, the sum of $66,967 97, of which $19,097 55 are on account of sixty iron coal cars.

The total amount of receipts of the company, from all sources, since its organization, are $953,406 31. The total enpenditures have been $995,451 97. The debt of the company is $47,580 42, and the cash in the treasury amounts to $5,531 94.

The whole amount of stock subscribed is $1,298,900 oo; of this $269,945 21 is still unexpended. The capital stock of the company is fixed at $1,500,000; three-fifths of which are subscribed by the State. In addition to this the State has guaranteed the bonds of the company to be used in the purchase of iron for the amount of $200,000.

Indiana.—The following are the leading statistics of this State, as shown by the recent census:—

Number of houses	186,182
Number of families	187,618
Population	990,258
Value of farms	$128,325,552
Value of farming implements	6,648,799
Capital invested in manufactures	7,235,220
Value of manufactured articles	19,199,681
Number of colleges	83
Students	6,290
Number of common schools	5,899
Value of real estate owned	170,000,000
Number of newspapers	98
Circulation	67,924
Churches	1,899
Value of church property	1,499,711
Value of home manufactures	1,682,918

Population of Maine.—Table exhibiting the population of Maine at different periods:

Date.	Pop.	Increase.	Ratio per cent of In.
1636	1,450		
1653	2,100	650	45 in 17 years.
1763	5,500	3,400	162 " 50 "
1735	9,000	3,500	63 1-2 " 32 "
1743*	12,000	3,000	33 1-3 " 8 "
1761	17,500	5,500	45 5-6 " 18 "
1764	24,020	6,520	37 6-7 " 3 "
1784	57,060	32,980	129 1-12 " 20 "
1790	96,500	39,540	69 3-8 " 6 "
1800	151,719	55,179	57 1-3 " 10 "
1810	228,705	76,986	50 3-4 " 10 "
1820	298,335	69,630	30 1-2 " 10 "
1830	399,995	101,660	33 1-3 " 10 "
1840	499,921	99,926	25 " 10 "
1850	583,026	83,105	16 3-5 " 10 "

*From 1636 to 1743 there was no official enumeration made, and the census, during that period are based upon the statement of different historians.

X.

RAILROADS OF NEW YORK, 1850, STATISTICAL.

NAME.	Road. Length of road in miles.	Length of road laid.	Length of double track, including sidings.	Length of branches owned by company.	Length of double track on branches.	Weight of rail per yard on main road.—lbs.	No. engine houses and shops.	No. of engines.	No. passenger cars, 1st class.	No. passenger cars 2d class & emigrant.	No. baggage, mail and express cars.	No. freight cars.	Speed in miles per hour of ordinary passenger trains, including stops.	Speed in miles per hour of ordinary passenger trains, when in motion.	Speed in miles per hour of express trains including stops.	Speed in miles per hour of express trains when in motion.	Speed in miles per hour of freight trains including stops.	Speed in miles per hour of freight trains when in motion.	Weight in tons of passenger trains, excluding passengers and baggage.	Weight in tons of freight trains, excluding freight.	Rate per mile charged for passengers. 1st class. cts.	2d class. cts.	3d class. cts.	Total tonnage of freight carried.	Product of forest.	Product of animals.	Vegetables.	Other agricultural products.	Manufactures.	Merchandise.	Other freight.	Number of persons killed.	Number of persons injured.	Time covered by return.
Albany and Schenectady...	17	17	9	1	..	60	3	7	36	33	45	34	25	25	28	28	15	15	....	....	3	2	....	63,012	2,330	18,015	3,265	1,113	3,018	18,504	16,732	..	..	12 months
Albany and W. Stockbridge	38¼	38¼	2½	....	..	56	2	..	..	..	..	....	25	30	....	....	12	15	78	150	3	2·4	....	170,586	7,397	23,810	76,926	4,408	21,975	9,816	26,254	..	..	12 "
Attica and Buffalo........	31½	31½	....	2½	..	62	3	6	8	..	..	43	20	28	30	32	14	15	....	....	2·81	1·55	....	24,184	2,346	7,439	989	1,005	1,089	7,734	3,579	1	2	12 "
Auburn and Rochester.....	78	78	85⅞	7⅞	..	67	4½	19	20	..	..	100	15½	21	27	33½	12	15	72·4	103¼	3¼	2	1½	34,145	......	......	......	......	......	......	......	5	..	10 "
Auburn and Syracuse......	....	....	....	....	..	......	..	..	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	......	......	......	......	......	......	......	......	..	..	....
Buffalo and Niagara Falls.	22	22	⅛	....	..	57	2	5	6	5	3	7	22	30	....	....	....	....	....	....	2·55	....	....	......	......	......	......	......	......	......	......	0	0	12 "
Cayuga and Susquehanna.	35	35	3	....	..	58	1	3	4	..	2	45	24	28	....	....	12	14	60	113	23-5	....	....	8,886	3,383	1,067	1,095	24	1,349	892	1,076	3	..	9 m. 11 d.
Chemung................	....	....	....	....	..	58	..	..	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	......	......	......	......	......	......	......	......	..	..	12 months
Hudson and Berkshire.....	31½	31½	1	....	..	56	2	4	4	..	2	28½	20	25	....	....	12	15	16	45	3	....	....	23,809	2,854	1,278	3,105	1,100	8,287	2,708	4,447	..	..	12 "
Hudson River...........	143¾	75	38	....	..	70	5	15	44	..	12	75	26	41	30	43	16	26	54	32	Var	ious	....	5,745	111	856	139	97	2,164	1,590	788	16	3	9 "
Long Island.............	....	....	....	....	..	......	..	..	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	......	......	......	......	......	......	......	......	..	..	....
New York and Erie.......	464	337	....	19	..	56 & 60	12	65	38	5	17	784	20	24	24½	28½	9¼	14	80	....	2	....	....	131,311	23,878	31,793	11,079	1,054	28,991	18,730	15,787	13	4	12 "
New York and Harlem....	....	80	18½	....	..	58	8	17	33	7	8	85	25	30	0	0	12	18	30	60	2	....	....	27,957	......	......	......	......	......	......	......	..	..	12 "
New York and New Haven	61	61	11½	....	..	64	5	18	40	..	12	75	24	35	30	35	12	20	45	100	2	....	....	15,473	1,769	829	212	1,819	3,890	4,110	2,844	..	..	12 "
Northern	118	op44	5	1	½	61	6	10	6	2	2	140	22	23½	22	23½	9¾	13	12	48	3·3	....	....	12,074	10,727	189	133	13	109	703	200	..	..	12 "
Oswego and Syracuse.....	35	35	1⅛	1⅛	..	57	1	4	5	..	2	28	20	23	22	24	12	15	50	82	3	1½	....	7,949	624	577	3,717	117	462	1,445	1,007	0	0	12 "
Rensselaer and Saratoga...	25¼	25¼	....	⅞	..	58	2	4	8	2	3	21	25	30	25	30	15	20	....	110	2·94	....	....	10,610	990	1,249	667	302	·1,734	3,389	2,279	0	0	9 "
Rochester and Syracuse...	104	104	113½	9½	..	65½	7	25	34	..	..	136	15½	21	27	33½	12	15	72·4	103¼	3¼	2	1½	9,604	......	......	......	......	......	......	......	2	..	2 "
Saratoga and Schenectady.	22	22	....	⅞	..	56	2	2	2	..	1	....	15	17	....	....	10	12	30	45	3	....	....	4,434	713	206	719	52	444	906	1,393	0	0	9 "
Saratoga and Washington.	....	....	....	....	..	......	..	..	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	......	......	......	......	......	......	......	......	..	..	....
Schenectady and Troy.....	20½	20½	....	1¾	..	56	3	4	5	2	2	28	20	25	25	30	15	20	....	....	22-7	1½	....	17,031	261	6,311	4,891	378	1,757	1,956	1,477	2	1	12 "
Syracuse and Utica.......	53	53	55	....	..	61 & 70	5	13	24	..	..	101	22¼	31	27	31	31¼	18⅜	62	112	2·8	1·9	1·5	......	......	......	......	......	......	......	......	14	0	12 "
Tonawanda..............	43½	43½	....	3	..	64	3	6	13	..	..	90	15½	17	26·4	30	14½	18	62½	118	3	1⅞	1½	29,211	......	......	......	......	......	......	......	1	2	12 "
Troy and Greenbush......	6	6	....	....	..	56	1	3	4	..	2	....	25	25	....	....	12	12	41	124	2½	....	....	38,988	2,803	9,503	12,299	706	4,850	879	7,948	1	1	12 "
Utica and Schenectady....	78	78	88	....	..	65	4	19	..	..	..	200	22	25	28	35	12	15	76	166	2·8	1½	....	98,695	6,201	27,955	13,337	2,250	11,118	25,937	11,896	4	0	12 "
Watertown and Rome.....	97	24	2	....	..	56	1	1	3	..	2	13	24	26	....	....	12	15	....	....	3	....	....	680	38	......	00	15	576	47	4	..	..	20 days.

ENGINEERS.

Atkinson, T. C.,
Alexandria and Orange Railroad, Alexandria, Va.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W, H.,
Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Floyd-Jones, Charles,
Alton and Sangamon Railroad, Alton, Illinois.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,
Nashville and Chattanooga R. R., Nashville, Tenn.

S. W. Hill,
Mining Engineer and Surveyor, Eagle River, Lake Superior.

Holcomb, F. P.
Southwestern Railroad, Macon, Ga.

Latrobe, B. H.,
Baltimore and Ohio Railroad, Baltimore, Md.

Miller, J. F.,
Buffalo and Conhocton Valley Railroad, Bath, N. Y.

Morris, Elwood,
Schuylkill Navigation, Schuylkill Haven, Pa.

Nott, Samuel,
Lawrence and Manchester Railroad, Boston,

Prichard, M. B.,
East Tennessee and Georgia R. R., Cleveland, Tenn.

W. Milnor Roberts,
Bellefontaine and Indiana Railroad, Marion, Ohio.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Steele, J. Dutton,
Pottstown, Pa.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

Tinkham, A. W.,
United States Fort, Bucksport, Me.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

Whipple, S.,
Civil Engineer and Bridge Builder, Utica, N. Y.

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Manning & Lee,

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July, 27, 1849.

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Chairs and Spikes.

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THEODOLITES, TRANSIT COMPASSES, and Levels, with Fraunhoffers Munich Glasses, Surveyor's Compasses, Chains, Drawing Instruments, Barometers, etc., all of the best quality and workmanship, for sale at unusually low prices, by

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AGENTS for the Balt. City Rolling Mill, from which establishment they are prepared to furnish Ellicott's round, square, and flat bar iron, puddled and charcoal boiler plates and billet iron—also agents for the sale of the Laurel, Gunpowder and Locust Grove (Balt.) forge pig irons, Locust Grove and Laurel Irons for car wheels, Caledonian boiler blooms made from cold blast iron, Old Colony and anti-Eatam nails, Wm. Jessop & Son's steel, Coleman's blister steel and nail rods, sheet, hoop, band, oval and common English iron.

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Railroad Iron.

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Troy, N.Y.

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WARREN DELANO, Jr., N.Y

JOHN M. FORBES, Boston.

ENOCH PRATT, Baltimore, Md

November 6, 1848.

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March 15, 1849

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THE UNDERSIGNED ARE PREPARED TO contract for the delivery of English Railroad Iron of favorite brands, during the Spring. They also receive orders for the importation of Pig, Bar, Sheet, etc. Iron. THOMAS B. SANDS & CO.,

73 New street,

February 3, 1849. New York.

Iron Store.

THE Subscribers, having the selling agency of the following named Rolling Mills, viz: Norristown, Rough and Ready, Kensington, Triadelphia, Pottsgrove and Thorndale, can supply Railroad Companies, Merchants and others, at the wholesale mill prices for bars of all sizes, sheets cut to order as large as 58 in. diameter; Railroad Iron, domestic and foreign; Locomotive tire welded to given size; Chairs and Spikes; Iron for shafting, locomotive and general machinery purposes; Cast, Shear, Blister and Spring Steel; Boiler rivets; Copper; Pig iron, etc., etc.

MORRIS, JONES & CO.,

Iron Merchants,

Schuylkill 7th and Market Sts., Philadelphia.

August 16, 1849. 1y33

Glendon Refined Iron.

Round Iron,	Band Iron,	Hoop Iron,
Square "	Flat "	Scroll "

Axles, Locomotive Tyres,

Manufactured at the Glendon Mills, East Boston, for sale by GEORGE GARDNER & CO.,

5 Liberty Square, Boston, Mass.

Sept. 15, 1849. 3m37

PATENT HAMMERED RAILROAD, SHIP & BOAT SPIKES.—The Albany Iron Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes from 2 to 12 inches in length, and of any form of head From the excellence of the material always used in their manufacture, and their very general use for rail roads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscribers at the works will be promptly executed.

JOHN F. WINSLOW, *Agent.*

Albany Iron and Nail Works, Troy, N. Y.

The above Spikes may be had at factory prices, of Erastus Corning & Co Albany; Merritt, & Co., New York; E. Pratt & Brother, Baltimore, Md.

RAYMOND & FULLERTON, 45 Cliff st.

Bowling Iron. Stamped B.O.

Railway Tire Bars
Locomotive and other Axles
Boiler Plates
Rivet Iron
Locomotive Frame do
Bars,

and every other description of this superior Iron.

The subscribers, agents for the sale of Bowling Iron, are prepared to execute orders for importation, especially for railway and machinery uses, with despatch from the manufacturers.

RAYMOND & FULLERTON, 45 Cliff st.

Ibbotson, Brothers & Co's CELEBRATED CAST STEEL AND

Best Cast Steel Royal Improved Files, well known as better adapted for Engineers' and Machinists' purposes than any now in use in the United States.

Every description of Square, Octagon, Flat and Round Cast Steel, Sheet, Shovel and Railway Spring Steel, etc., and Steel to order for any purposes—manufactured at their works in Sheffield—and universally known by the old stamp "Globe."

HENRY I. IBBOTSON, Agent.,
218 Pearl st., New York.

Railroad Iron. SPIKES.

Wrought Iron CHAIRS, New Pattern.

THE Undersigned continues to contract, as usual, for the above articles. The reputation already acquired for their excellent quality is a guarantee that strict attention shall continue to be paid to the wants and interests of purchasers.

CHARLES ILLIUS,
20 Beaver St., New York

WILLIAM JESSOP & SONS' CELEBRATED CAST-STEEL.

The subscribers have on hand, and are constantly receiving from their manufactory,

PARK WORKS, SHEFFIELD,

Double Refined Cast Steel—square, flat and octagon.
Best warranted Cast Steel—square, flat and octagon.
Best double and single Shear Steel—warranted.
Machinery Steel—round.
Best and 2d gy. Sheet Steel—for saws and other purposes.
German Steel—flat and square, "W. I. & S." "Eagle" and "Goat" stamps.
Genuine "Sykes," L Blister Steel.
Best English Blister Steel, etc., etc., etc.

All of which are offered for sale on the most favorable terms by WM. JESSOP & SONS,
91 John street, New York.

Also by their Agents—
Curtus & Hand, 47 Commerce street, Philadelphia.
Alex'r Fullerton & Co., 119 Milk street, Boston.
Stickney & Beatty, South Charles street, Baltimore.

May 6, 1848.

Railroad Iron.

B. O. Railway Tires,
Scotch Pig Iron,
Railway Wheels,
Tin Plates and Banca Tin,
Muntzs Patent Metal Sheathing,
Baltimore Copper.

Contracts for Rails made on behalf of the manufacturers, for delivery at any ports in the United States, at fixed prices.

Bowling Tires and Tire Bars and Scotch Pigs imported to order.

Muntz's Ship-sheathing, and a general stock of Tin Plates and Banca Tin in store, and for sale by

IRONDALE PIG METAL, MANUFACTURED and for sale by the Bloomsburg Railroad Iron Co.
LINDLEY FISHER, Treasurer.
75 N. Water St., Philadelphia.

Faggotted Car and Engine Axles

FORGED by RANSTEAD, DEARBORN & Co.,
Boston, Mass.

These Axles enjoy the highest repulation for excellence, *and are all warranted.*

Railroad Iron.

3,000 TONS C. L. MAKE 63½ lbs. per yard, now landing and to arrive.

Also contracts made for future delivery of above superior make English Iron.

300 Tons Banks Best Iron, Round, Square and Flat.
200 " English Bar " " " "
10 " 9-16 Square Iron for Railroad Spikes.

For sale in lots to suit purchasers by
DAVID W. WETMORE.
New York, March 26, 1850. 3m

Railroad Iron.

CONTRACTS msde by the subscribers, agents for the manufacturers, for the delivery of Railway Iron, at any port in the United States, at fixed prices, and of quality tried and approved for many years, on he oldest railways in this country.

RAYMOND & FULLERTON, 45 Cliff st.

JOHNSON, CAMMELL & Co's Celebrated Cast Steel, AND ENGINEERING AND MACHINE FILES,

which for quality and adaptation to mechanical uses, have been proved superior to any in the United States. Every description of square, octagon, flat and round cast steel, sheet, shovel and railway spring steel, best double and single shear steel, German steel, flat and square, goat stamps, etc. Saw and file steel, and steel to order for any purposes, manufactured at their Cyclops Steel Works Sheffield.

JOHNSON, CAMMELL & CO.,
100 William St., New York.

November 23 1849.

Bowling Tire Bars.

40 Best Flange Bars 5½x2 inches, 11 feet long.
40 " 5½x2 " 7 feet 8 in. long.
40 " Flat " 6x2 " 11 feet long.
40 " 6x2 " 7 feet 8 in. long.

Now in store and for sale by
RAYMOND & FULLERTON,
45 Cliff street.

Wheel, Forge and Foundry Iron.

LOCUST GROVE Wheel Iron of great strength and superior chilling property.

Balt. Charcoal Forge Iron, from Patuxent, Curtis Creek and Gunpowder furnaces.

Elkridge Foundry Iron, of superior strength and softness. Anthracite and Charcoal Iron from Pennsylvania and Virginia. Gas and Water Pipes, Lamp Posts from Elkridge furnace.

LEMMON & GLENN,
3m9 62 Buchanan's Wharf, Baltimore.

S. S. Keyser & Co., IRON WAREHOUSE,

Corner of South and Pratt Streets,
BALTIMORE, MD.

Selling Agents for the Rough and Ready Bar Iron and Elk Boiler and Flue Iron Rolling Mills, Sarah and Taylor Furnaces, and Wrightsville Hollow Ware Foundry, and Dealers in Bar and Sheet Iron, and Cast, Sheer, German, Blister, Spring and Electerised Steel, etc., etc.

Smith & Tyson,

GENERAL COMMISSION MERCHANTS,
No. 25 South Charles St., Baltimore, Md.

AGENTS for the Celebrated Columbia Pig Iron, suitable for Car Wheels and Chilled Rolls.

Columbia refined Charcoal Blooms; Refined Charcoal Juniatta Billet Iron for Wire; Refined Iron for Bridging, of great strength; Cut Nails, Spikes, and Brads; Railroad Spikes and Wrought Chairs. 22tf

Tredegar Iron Works.

ROLLING MILL FOUNDRY AND MACHINE SHOPS. The undersigned continues to manufacture at his Works in this city (from best charcoal metal) Bar Iron of every description, embracing—Rounds and Squares, from ¼ to 5 inches diameter.
Flats, from ¼ to 7 inches, all thicknesses.
Bands and Scrolls, all sizes. Boiler plate and Plough Iron. Railroad and Locomotive Axles and Tires. Locomotive Frames, Spikes and Plates. Hoops, Ovals, Half Ovals, Half Rounds, Angle, T, L, and indeed every description of Iron usually manufactured, all of which he warrants to be equal to any made in this country. He also manufactures at his Foundry and Machine Shops all descriptions of Railroad Work, say, Locomotives, Railroad Wheels and Axles complete and ready for the road, Railroad Chairs, etc. Also, Marine and Stationary Engines all sizes, Sugar mills and Engines, Horse mills, and every kind of Machinery usually required for the operations of the country. He has paid particular attention to getting up machinery, etc., for Gold Mine operations, and those in want of such work might find it to their advantage to give him a call. J. R. ANDERSON.

Richmond, Va., Sept. 10, 1850.

CUT NAILS OF BEST QUALITY, BAR IRON (including Flat Rails) manufactured and for sale by FISHER, MORGAN & CO.,
75 N. Water St., Philadelphia.

Car Wheel Iron.

100 Tons "Columbia" No. 2 Cold Blast Charcoal Iron.
300 Tons "Salisbury" No. 1, do. do.

For sale by CHARLES T. GILBERT,
No. 80 Broad st.

New York, Sept. 21, 1850.

Railroad Spikes.

THE subscribers are prepared to make and execute contracts for Railroad Spikes of a superior quality, manufactured by the New Jersey Iron Company, at Boonton. DUDLEY B. FULLER & CO.
139 Greenwich st. corner of Cedar.

Railroad Iron.

1650 Tons, weighing about 61 lbs. per yard, 40 tons, weighing about 52 lbs. per yard, and 825 tons, weighing about 53½ lbs. per yard, of the latest and most approved patterns of T rail, for sale by
BOORMAN, JOHNSTON & CO.,
119 Greenwich street.

New York, Aug. 26, 1850.

N.B.—B., J. & Co are also prepared to take contracts for English rails, delivered in any of the Atlantic ports of the United States.

Railroad Iron.

THE Undersigned, Agents for Manufacturers, are prepared to contract to deliver Rails of superior quality, and of any size or pattern, to any ports of discharge in the United States.

COLLINS, VOSE & CO.,
74 South St.

New York, June 1, 1850.

Spikes, Spikes, Spikes.

ANY person wishing a simple and effective Spike Machine, or a number of them, may be supplie by addressing J. W. FLACK,
March 6, 1850. Troy, N Y

Railroad Iron.

2000 Tons, weighing 58 pounds per lineal yard, of the most approved pattern of T rails, in store and to arrive, for sale by
COLLINS, VOSE & CO.,
74 South St.

New York, June 1, 1850.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.
Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the *very best* quality for special purposes, is respectfully invited. COOPER & HEWITT,
17 Burling Slip, New York.

February 15, 1850.

Railroad Iron.

THE Undersigned, Agents for Manufacturers, are prepared to contract for the delivery of English, Welsh and Scotch Rails, of any pattern and weight, also for every description of English, Welsh, Scotch, and Swedish Iron, Railway Chairs and Spikes, Rivets, Bolts, Nuts, Washers, Chain Cables, Anchors, Tin Plates, German Spelter, Iron Castings, and every description of Machinery.

WILLIAM BIRD & CO.,
Iron and Tin Plate Merchants,
44 Wall st., New York.
And at 5 Martin's Lane, City, London,
and 140 Buchanan st. Glasgow.

July 27th, 1850.

Railway Iron.

THE Subscribers will contract to deliver, in the course of the ensuing Spring and Summer, the best English Rails, made by a particular specification, and of any pattern required.

DAVIS, BROOKS & CO.,
68 Broad st.

On hand for sale, English rails of 58 lbs. to the yard, made by particular specifications.

January 10, 1851. 2m

To Iron Masters.

WANTED—A Person to take charge of a Blast Furnace for Smeling Iron, for further information apply to COLLINS, VOSE & CO.,
74 South street.

Railroad Iron for Sale.

THE Mansfield and Sandusky City Railroad Co. have on hand from twelve to fifteen hundred tons of American Flat Bar Railroad Iron, weighing 38 lbs. to the lineal yard, which they offer for sale at reasonable rates.

The iron has been in use about four years, and is sound and in good condition. It is 2½ by ½.

It will be ready for delivery at short intervals between the opening of navigation in the spring and the 1st September next.

For further particulars inquire at the office of the company at Sandusky City, Ohio.

C. G. FORBES, President.

December 24, 1850.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply at the office of the Company, No. 73 South 4th st., Philadelphia,

Or to the Agents,
CHOUTEAU, MERLE & SANFORD,
NO. 51 New st., New York.

September, 1850.

American Railroad Iron.

1000 Tons, weighing 50 lbs, per yard, manufactured by Reeves, Abbott & Co., at the Safe Harbor Iron Works, and now lying in yard at Brooklyn, for sale by

CHOUTEAU, MERLE & SANFORD,
No. 51 New street.

Tubes, Tubes, Tubes.

THE undersigned have received special permission from, and are in direct communication with, the *Birmingham Patent Lap Welded Iron Tube Company*, for the sale of their very excellent and superior Boiler and Gas Tubes in large or small quantities.—These Tubes are sold very extensively in England and on the continent of Europe are sold exclusively by

WM. BIRD & CO.,
Iron and Tinplate Merchants,
44 Wall st., New York
5 Martin's Lane, City, London,
and 140 Buchanan st., Glasgow.

Wanted.

WANTED—A Situation in a Civil Engineer's office, by a Young Gentleman from Scotland—has had six years' experience as a practical Draughtsman, Architect, Surveyor, and Leveller in one of the principal civil engineering establishments in Scotland. First rate reference given. Apply to Messrs. Cooper & Hewitt, 17 Burling Slip, or to

JAS. SNEDDON,
23 Harrison st.

Wanted.

A Second-hand Locomotive of 10 to 15 tons weight. A note, giving lowest terms, addressed to A. B., Railroad Journal Office, will receive attention.

January 9, 1850.

Wanted.

A Second-hand Locomotive, weighing from 10 to 15 tons. A note, addressed A. B., at "Railroad Journal" office, will receive attention, if sent soon.

January 21, 1851.

For Sale.

TWO Locomotive Engines—10½ tons weight, built by Baldwin. Also Four Eight-wheeled Passenger Cars, with side seats, all in good running order. Apply to WM. E. MORRIS,

Office of Philad., Germantown & Norristown Railroad Co., 9th and Green sts., Philadelphia. 3m5

Great Work on Bridge Building, etc., etc.

JUST published in medium folio, One Dollar, 75 cts. to subscribers.

Part IV of a "THEORETICAL AND PRACTICAL TREATISE ON THE CONSTRUCTION OF BRIDGES IN STONE, IRON AND WOOD," including the Equibrium of Arches, the mathematical principles of the Oblique Arch, Suspension Arch, etc., Construction of Foundations in Water, Centering, Oblique Arches, etc., the application of Iron to Railroad Structures, Practical Tunnelling, Suspension Bridges, etc.; illustrated by numerous accurately executed Plans, Elevations, Sections and Details of Stone, Iron and Wood Bridges, Viaducts, Tunnels, Culverts, Machines, etc., constructed by the most eminent Architects and Engineers in Europe and the United States, and numerous Original Designs for Bridges, Viaducts, Culverts, etc. The whole calculated to meet the exigencies of Engineers, and assist Draughtsmen, Bridge Builders, Mechanics and Students. By George Duggan, Architect and Civil Engineer.

The present part contains beautifully executed plans, elevations, sections, and details of the Iron Lattice Bridge 140 feet span over the canal in the suburbs of Dublin on the line of the Dublin and Drogheda R.R., Plans, elevations and sections of the Timber Bridge over the Schuylkill, at Market st., Philadelphia, with Arches 160 and 190 feet span. Plans, elevations and sections of a Timber Bridge with Arches 155 and 200 feet span over the Delaware. Also, plans, elevations, sections and details of Lattice and Frame Wood Bridges, explanatory of Nathaniel Towns and Colonel S. H. Long's methods of constructing Bridges of Wood, with the continuation of the Articles on Coffer dams, Concrete, Limes, Mortars, Cements, etc.

Published by George Duggan, 300 Broadway, New York, to whom all communcations should be addressed and subscriptions forwarded.

☞ Parties remitting Mr. Duggan $5. and the remainder $4 when they have been supplied with the first six parts of the "Theoretical and Practical Treatise on Bridge Building, etc.," shall receive it monthly as published. To those making Mr. Duggan a present remittance of $9, the work will be forwarded post free to any part of the United States.

Great American Engineering

AND MECHANICAL WORK, just published in medium folio One Dollar, 75 cts. to Subscribers.

Part X. of "Specimens of the Stone, Iron & Wood Bridges Viaducts, Tunnels, Culverts, &c., &c., of the United States Railroads." By George Duggan, Architect and Civil Engineer.

The present part contains beautifully executed plans, elevations, and sections of the Timber Bridge with Arches 136 feet span, over the Mohawk river, on the line of the Utica and Schenectady R.R. Plans elevations, sections and isometrical views of Timber Piers 100 feet high, a Timber Bridge of 55 feet span, and Ice Breakers, on the line of the Little Schuylkill and Susquehanna R.R.

Also plans, elevations, sections, isometrical views and details of an Iron Bridge 356 feet long, with Arches 81 feet span, erected by the N. York Iron Bridge Co. over Moores Creek, on the line of the Virginia Central R.R., and plans, elevations and sections of an Iron Plank Road Bridge 160 feet span, erected over Buffalo creek by the same company, with a description of Col. Long's method of constructing Bridges in Iron, and an explanation of the causes that led to the failure of the Iron Bridge 60 feet span, near Lackawaxen, on the line of the New York and Erie R. R., at midday, on the 31st July last, by which several lives were lost, and a great amount of property destroyed.

Published by GEORGE DUGGAN,
300 Broadway, New York.

To whom all communications should be addressed and subscriptions forwarded.

Railroad Lanterns.

COPPER and Iron Lanterns for Railroad Engines, fitted with heavy silver plated Parabolic Reflectors of the most approved construction, and Solar Argand Lamps; manufactured by

HENRY N. HOOPER & CO.,
No. 24 Commercial St. Boston.

August, 16, 1849. 6m33

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings, Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.

HENRY N. HOOPER & CO.

Boston, March 23, 1850. 6m13

TO RAILROAD COMPANIES, CAR MANUFACTURERS, etc.

THE Undersigned hereby gives public notice, that the Commissioner of Patents, pursuant to his decision in relation thereto, on the 8th day of October, 1850, issued to him a Patent for the sole right to manufacture, and exclusive use of the INDIA RUBBER CAR SPRING, on account of priority of invention of said Spring. F. M. RAY.

New York, Oct. 23, 1850.

Iron Trade of Pennsylvania.

DOCUMENTS and Statistics relating to the Manufacture of Iron in the State of Pennsylvania—giving a history of the manufacture from its commencement to this date, illustrated by diagrams. Also tables giving the address and capacity of every establishment in the State. Prepared by direction of the late convention of the trade held in Philadelphia. For sale by

LINDSAY & BLACKISTON, Philadelphia.
FIELDING LUCUS, Jr., Baltimore.
HENRY G. NICHOLS, 79 Water st., N. Y.
or at this office—price $1 00.

It will be sent by mail to any order enclosing the money, and post paid.

Emerson's Patent Ventilator,

ADAPTED to Cars, Engine houses, Public Halls, Factories, Churches, School Houses, Dwellings, Chimney Flues, etc.

This Ventilator is stationary, and cannot get out of order. It is constructed in such conformity to certain ascertained laws of pneumatics, as to insure a constant draft outward, whatever may be the changing direction of the wind. The Massachusetts Mechanic Association have awarded a gold medal to the Inventor, and the Manufacturers have already disposed of over 3,000 of the article. Manufactured and sold by

CHILSON, ALLEN, WALKER & Co.,
351 Broadway, New York.

Providence Tool Co.,

MANUFACTURERS OF

Plane Irons, Tooth Irons, Soft Moulding and Rabbet Irons, Cornice Irons, Plow Bitts, and Planing Machine Knives:

NUTS, WASHERS AND BOLTS.

—ALSO—

PLATE HINGES AND PICK AXES.

They are prepared to execute orders for all descriptions of Cold Punching and Job Work.

WM. FIELD, Agent. RUFUS WATERMAN, Treas.

PROVIDENCE, R. I.

Lovegrove's Patent Cast Iron Water and Gas Pipes.

THE Subscriber, the Inventor and Patentee of the Centrifugal mode of giving form to metallic substances while in a molten state, is preparing to make Cast Iron Water and Gas Pipes, of any dimensions, at prices much lower than they can be made in the old manner, and the pipes warranted to stand a pressure of three hundred pounds to the square inch, and to be soft enough to drill. Steam Engines and all kinds of machinery. Cast Iron Doors and Frames, and Mill Castings of every description, made to order.

THOMAS J. LOVEGROVE,
Machinist and Founder,
West Falls Avenue, below Pratt st., Baltimore.

Railroad Letting, in Virginia.

PROPOSALS will be received at the office of the chief engineer of the Richmond and Danville railroad, until 9 o'clock A. M., Monday, the 10th of March, to be decided the 13th of the same month, for doing all the grubbing, clearing, grading, ditching and masonry, on the Richmond and Danville railroad, in the counties of Amelia, Nottoway, Prince Edward, Lunenburg and Charlotte, comprehending about 45 miles of road.

Profiles and specifications can now be seen at the office of the company in Richmond; and after the 10th of February, at the offices of the resident engineers, on the line, at Burkeville and Keysville.

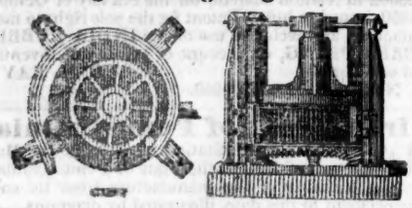
By order of the board of directors,

ANDREW TALCOTT,
Chief Engineer R. & D. railroad.

Engineering department R. & D. R. R. Co., Richmond, Jan. 22, 1851.

MACHINERY.

Henry Burden's Patent Revolving Shingling Machine.



THE Subscriber having recently purchased the right of this machine for the United States, now offers to make transfers of the right to run said machine, or sell to those who may be desirous to purchase the right for one or more of the States.

This machine is now in successful operation in ten or twelve iron works in and about the vicinity of Pittsburgh, also at Phœnixville and Reading, Pa., Covington Iron Works, Md., Troy Rolling Mills, and Troy Iron and Nail Factory, Troy, N. Y., where it has give ne universal satisfaction.

Its advantages over the ordinary Forge Hammer are numerous; considerable saving in first cost; saving in power; the entire saving of shingler's, or hammersman's wages, as no attendance whatever is necessary, it being entirely self-acting; saving in time from the quantity of work done, as one machine is capable of working the iron from sixty puddling furnaces; saving of waste, as nothing but the scoria is thrown off, and that most effectually; saving of staffs, as none are used or required. The time required to furnish a bloom being only about six seconds, the scoria has no time to set, consequently is got rid of much easier than when allowed to congeal as under the hammer. The iron being discharged from the machine so hot, rolls better and is much easier on the rollers and machinery. The bars roll sounder, and are much better finished. The subscriber feels confident that persons who will examine for themselves the machinery in operation, will find it possesses more advantages than have been enumerated. For further particulars address the subscriber at Troy, N. Y. P. A. BURDEN.

Railroad Spikes and Wrought Iron Fastenings.

THE TROY IRON AND NAIL FACTORY, exclusive owner of all Henry Burden's Patented Machinery *for making Spikes*, have facilities for manufacturing large quantities upon short notice, and of a quality unsurpassed.

Wrought Iron Chairs, Clamps, Keys and Bolts for Railroad fastenings, also made to order. A full assortment of Ship and Boat Spikes always on hand.

All orders addressed to the Agent at the Factory will receive immediate attention.

P. A. BURDEN, *Agent*,
Troy Iron and Nail Factory, Troy, N. Y.

CHILLED RAILROAD WHEELS.—THE UNdersigned are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of spokes or discs, by a new process which prevents all strain on the metal, such as is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St., below 13th,
Philadelphia, Pa.

Brown's Old Established SCALE WARE HOUSE,

NO. 234 WATER ST., NEW YORK.

THE Subscriber, Practical Manufacturer of Scales of every description, respectfully asks the attention of Railroad Companies to his Improved Wrought Iron Railroad Track and Depot Scales which for strength, durability, accuracy, convenience in weighing, and beauty of workmanship, are not surpassed by any others in this country.

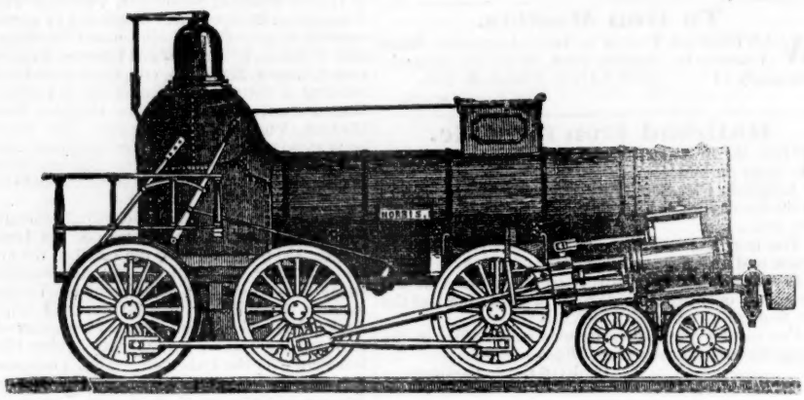
He is aware that this is rather a bold assertion for him to make, yet he can say with confidence that they have but to be tried to give them precedence over all others. J. L. BROWN.

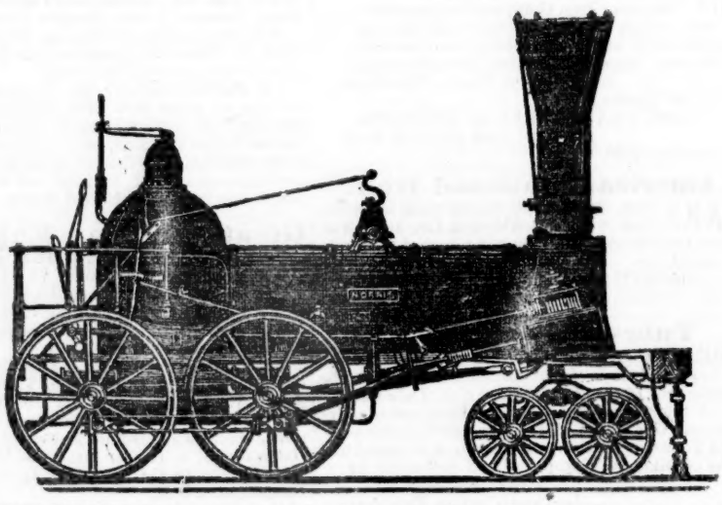
☞ Bank Scales made to order, and all Scales of his make Warranted in every particular.

References given if required

NORRIS' LOCOMOTIVE WORKS.

BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA,





THE UNDERSIGNED Manufacture to order Locomotive Steam Engines of any plan or size.

Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Wrought Iron Tyres made of any required size—the exact diameter of the Wheel Centre, being given, the Tires are made to fit on same without the necessity of turning out inside.

Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS, BROTHERS

PATENT MACHINE MADE HORSE-SHOES.

The Troy Iron and Nail Factory have always on hand a general asssortment of Horse Shoes, made from Refined American Iron.

Four sizes being made, it will be well for those ordering to remember that the size of the shoe increases as the numbers—No. 1 being the smallest. P. A. BURDEN, *Agent*,
Troy Iron and Nail Factory, Troy, N. Y.

Etna Safety Fuse.

THIS superior article for igniting the charge in wet or dry blasting, made with DUPONT'S best powder, is kept for sale at the office and depot of

REYNOLDS & BROTHER,
☞ *Sole Manufacturers,* ☜
No. 85 Liberty St.
NEW YORK.

And in the principal cities and towns in the U. States.

☞ The Premium of the AMERICAN INSTITUTE was awarded to the *Etna Safety Fuse* at the late Fair held in this city.

November 3, 1849. 1y

COLUMBUS, OHIO,

Railroad Car Manufactory. RIDGWAYS & KIMBALL,

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